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ABSTRACT

The National Household Education Survey (NHES) is a data collection system of the National Center for Education Statistics, which has the legislative mission of collecting and publishing data on the condition of education in the United States. The NHES provides information on educational issues that are best addressed by contacting households rather than educational institutions. It is a telephone survey of the noninstitutionalized civilian population of the United States. Households are selected through random digit dialing methods, and data are collected using computer-assisted telephone interviewing. Approximately 60,000 households are screened for each administration, and those who meet certain criteria are sampled for more detailed interviews. This report examines the reliability of two components of the NHES for 1993, the School Safety & Discipline and School Readiness surveys. Measurement errors were estimated by reinterviewing a sample of respondents and asking them a subset of items from the original interview. Of the 2,108 cases selected, 1,879 reinterviews were actually conducted, for an unweighted completion rate of 89.1%. Indexes of consistency were prepared for specific items. Many School Safety & Discipline items had moderate to high inconsistencies. An appendix presents the reinterview questions. (Contains 5 figures, 1 exhibit, 18 tables, and 16 references.) (SLD)

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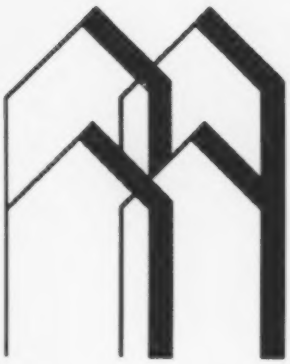
Technical Report June 1997

ED 408 368

1993 National Household Education Survey

Reinterview Results for the School Safety and Discipline and School Readiness Components



National Household Education Survey

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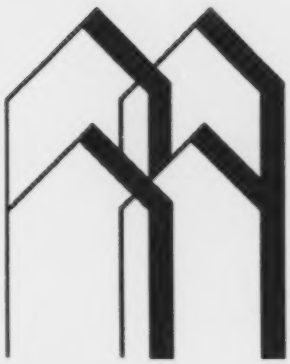

National Household Education Survey

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Table of Contents

	Page
Acknowledgments	vi
Background	1
Overview	2
Study Design	4
NHES:93 Sample Design	4
Reinterview Design	5
Analysis Methods	9
Index of Inconsistency and Correlation	14
Measurement Errors in the NHES:93	19
Response Variability in the SS&D Component	19
Response Bias in the SS&D Component	25
Response Variability and Bias in the SR Component	29
Composite Variables	41
Reconciliation Issues	41
Summary and Recommendations	49
References	52
Appendix A: Reinterview Questionnaires	A-1

List of Tables

Table 1.	Weighted completion and response rates for the NHES:93, by survey component	5
Table 2.	Reinterview sample sizes, completed interviews, and unweighted completion rates, by major path	7
Table 3.	Number of days between completion of original interview and reinterview	8
Table 4.	General format of interview - reinterview results	10
Table 5.	Summary of gross difference rates, indexes of inconsistency, and correlations, based on original and unreconciled reinterview responses from the SS&D, by groupings of items	20
Table 6.	Estimates of gross difference rates, indexes of inconsistency, and correlations from SS&D reinterviews of parents of 3rd to 5th graders	22

List of Tables (continued)

Page

Table 7. Estimates of gross difference rates, indexes of inconsistency and correlations from SS&D reinterviews of parents of 6th to 12th graders 23

Table 8. Estimates of gross difference rates, indexes of inconsistency, and correlations from SS&D reinterviews of 6th to 12th graders 26

Table 9. Summary of net difference rates based on original and reconciled reinterview responses from the SS&D, by groups of items 28

Table 10. Estimates of net difference rates from SS&D reinterviews of parents of 6th to 12th graders 30

Table 11. Estimates of net difference rates from SS&D reinterviews of parents of 3rd to 5th graders 32

Table 12. Estimates of net difference rates from SS&D reinterviews of 6th to 12th graders 33

Table 13. Estimates of gross difference rates, indexes of inconsistency, and correlation's from SR reinterviews 36

Table 14. Estimates of net difference rates from SR reinterviews 39

Table 15. Estimates of agreement between original, unreconciled reinterview, and reconciled reinterview for SS&D, parents of 6th to 12th graders 43

Table 16. Estimates of agreement between original, unreconciled reinterview, and reconciled reinterview for SS&D, parents of 3rd to 5th graders 45

Table 17. Estimates of agreement between original, unreconciled reinterview, and reconciled interview for SS&D, 6th to 12th graders 46

Table 18. Estimates of agreement between original, unreconciled reinterview, and reconciled reinterview for SR 48

List of Figures

Figure 1. Scattergram of the index of inconsistency and the correlation for the SR reinterview 16

Figure 2. Scattergram of the index of inconsistency and the correlation for parents of 6th to 12th graders in the SS&D reinterview 16

Figure 3. Scattergram of the index of inconsistency and the correlation for parents of 3rd to 5th graders in the SS&D reinterview 17

Figure 4. Scattergram of the index of inconsistency and the correlation for 6th to 12th graders in the SS&D reinterview 17

List of Figures (continued)

Page

Figure 5. Scattergram of the gross difference rate and the correlation for the SR reinterview 18

List of Exhibits

Exhibit 1. Typical CATI reconciliation screen 8

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Background

The National Household Education Survey (NHES) is a data collection system of the National Center for Education Statistics (NCES), which has as its legislative mission the collection and publication of data on the condition of education in the Nation. The NHES is specifically designed to support this mission by providing information on those educational issues that are best addressed by contacting households rather than schools or other educational institutions. The NHES provides descriptive data on educational activities of the U.S. population and offers policymakers, researchers, and educators a variety of statistics on the condition of education in the United States.

The NHES is a telephone survey of the noninstitutionalized civilian population of the U.S. Households are selected for the survey using random digit dialing (RDD) methods, and data are collected using computer-assisted telephone interviewing (CATI) procedures. Approximately 60,000 households are screened for each administration, and individuals within households who meet predetermined criteria are sampled for more detailed or extended interviews. The data are weighted to permit estimates of the entire population. The NHES survey for a given year typically consists of a Screener, which collects household composition and demographic data, and extended interviews on two substantive components addressing education-related topics. In order to assess data item reliability and inform future NHES surveys, each administration also includes a subsample of respondents for a reinterview.

The primary purpose of the NHES is to conduct repeated measurements of the same phenomena at different points in time, although one-time surveys on topics of interest to the Department of Education are also conducted. Throughout its history, the NHES has collected data in ways that permit estimates to be tracked across time. This includes repeating topical components on a rotating basis in order to provide comparative data across survey years. In addition, each administration of the NHES has benefited from experiences with previous cycles, resulting in enhancements to the survey procedures and content. Thus, while the survey affords the opportunity for tracking phenomena across time, it is also dynamic in addressing new issues and including conceptual and methodological refinements.

A new design feature of the NHES program implemented in the NHES:96 was the collection of demographic and educational information on members of all screened households, rather than just those households potentially eligible for a topical component. In addition, this expanded screening feature included a brief set of questions on an issue of interest to education program administrators or policymakers. The total Screener sample size was sufficient to produce state estimates of household characteristics for the NHES:96.

Full-scale implementations of the NHES have been conducted in 1991, 1993, 1995, and 1996. Topics addressed by the NHES:91 were early childhood education and adult education. The NHES:93 collected information about school safety and discipline and school readiness. The 1991 components were repeated for the NHES:95, addressing early childhood program participation and adult education. Both components underwent substantial redesign to incorporate new issues and develop new measurement approaches. In the NHES:96, the topical components were parent/family involvement in education and civic involvement. The NHES:96 expanded screening feature included a set of questions on public library use.

In addition to its topical components, the NHES system has also included a number of methodological investigations. These have resulted in technical reports and working papers covering diverse topics such as telephone

undercoverage bias, proxy reporting, and sampling methods. This series of technical reports and working papers provides valuable information on ways of improving the NHES. More information on the NHES:93 is available in Brick, et al. (1994b, 1994c).

Overview

This report examines the reliability of the responses to the interviews in both the School Safety & Discipline (SS&D) and School Readiness (SR) components of the NHES:93. Estimates from these components, like the estimates from every sample survey, are subject to both sampling error and nonsampling error. Sampling errors, the differences between the population values and the sample estimates that arise because data are obtained from only a sample of the population, are generally well understood and can be estimated from the survey data themselves. Nonsampling errors, on the other hand, arise from a variety of sources and are more difficult to measure. Important components of nonsampling error for the NHES:93 include coverage, nonresponse, and measurement errors.

In this analysis, measurement errors are estimated by reinterviewing a sample of respondents and asking them a subset of the same items included in the original interview. The reinterview procedure does not account for all the measurement errors in the interviewing process. For example, systematic errors that would be made in both the original interview and the reinterview are not discovered with this approach. Examples of systematic errors are respondents consistently underreporting income by excluding interest income, or respondents reporting that no students brought weapons to school, a possible social desirability bias. In contrast, the statistics produced by comparing the original and reinterview responses estimate the consistency of reporting, assuming both interviews were conducted under the same general conditions.

A reinterview was conducted for the early childhood component of the NHES:91 (Brick and West 1992) The approach to the reinterview for the NHES:93 is similar to that study, but the methods used expand on those in the NHES:91. The general review of the design and analysis of reinterviews presented by Forsman and Schreiner (1991) is useful background for understanding the goals and methods used in the NHES:93 reinterview. Brick et al. (1994a) discuss the use of reinterview data in the broader context of other nonsampling errors.

In the NHES:93 reinterview study, the same respondents were asked to respond to the same items on different occasions. They may have given different responses at these two times. Such discrepancies in responses can be grouped into four categories:

- Circumstances may have changed between the first and second interview and both answers, although different, may be correct.
- The original data item may have been recorded incorrectly (interviewer error) or reported incorrectly (respondent error).
- The reinterview data item may have been recorded or reported incorrectly.
- Both the original and reinterview responses may have been recorded or reported incorrectly.

In the NHES:93 reinterviews, discrepancies between some of the original interview items and the reinterview items were reconciled. This means that when the reinterview response was different from the original response, the interviewer asked the respondent to verify which response was correct. This process of reconciling the responses was done after the reinterview was completed, and it was done only for selected items. For items that were reconciled, there are three different responses available for analysis: the original response, the unreconciled reinterview response, and the

reconciled response when the original and reinterview responses were not identical.

In this report, all three of these responses are used. Typically, the difference between the original response and unreconciled reinterview response is used to assess the consistency of reporting, while the difference between the original and reconciled responses is used to assess the bias in the estimate from the original survey. The suitability of the reconciled data for estimating response bias is dependent upon the reconciled response being more accurate than the original and reinterview response (Forsman and Schreiner 1991). This condition is examined using the NHES:93 data later in this report.

An objective in many reinterview programs is to provide a check on interviewers who might be recording entire interviews without speaking to the respondents (U.S. Department of Commerce 1968). Since the NHES:93 was a CATI survey operated in a centralized location, there was no need to design reinterviews to verify that interviews were genuine. The CATI interviews were closely monitored, and it was highly unlikely that a telephone interviewer could invent whole interviews.

The primary objectives for the NHES:93 reinterview program were

- To identify survey items that were not reliable, i.e., the two interviews did not elicit the same response;
- To quantify the magnitude of the response variance for groups of items collected from the same respondent at two different times; and
- To provide feedback to improve the design of questionnaire items for future surveys.

A subset of the original SS&D and SR questionnaire items was included in the reinterview program for the NHES:93 to reduce the burden on respondents who had already completed one or more full interviews and to prevent asking some questions that were dependent on the specific date of the interview. In general, the items selected were those that were very important substantively, were not highly time dependent, and were not already examined in previous NHES reinterviews. The reinterview questionnaires are reproduced in full in Appendix A.

Items were selected from specific subject areas. Those subject areas chosen for the reinterview and the associated populations for each are as follows:

SS&D Reinterview Subject Areas

School characteristics (all parents)
School environment (all)
School safety (all)
School discipline policy (all)
Tobacco, alcohol, and other drugs (all)
Alcohol and drug education (all)
Child characteristics (all parents)
Family characteristics (all parents)
Community characteristics (all)

SR Reinterview Subject Areas

Developmental profile (preschoolers only)
Early childhood programs (all)
Child adjustment to kindergarten or primary school (kindergarten and primary only)
Teacher feedback on child's performance and behavior (kindergarten and primary only)
Special help in school (primary only)
Health and nutrition (all)
Entry to kindergarten (kindergarten and primary)
Reading and television (all)

Some of the key features of the study design of the NHES:93 reinterview program are described below. The properties of the statistics computed using the reinterview responses are then described and these statistics are presented for the SS&D and SR components of the NHES:93. The final section of the report summarizes the

findings and provides some recommendations for future work.

Study Design

NHES:93 Sample Design

The NHES:93 was a RDD telephone survey conducted with persons in a sample of telephone households in the 50 States and the District of Columbia between January and May 1993 using computer-assisted interviewing. First, a screening interview was administered to identify households and eligible persons within the households. The study included two components: an SS&D interview of parents of students enrolled in grades 3 through 12, and an SR interview of the parents of children from 3 to 7 years old or 8 to 10 years old and in second grade or below. For the SS&D component, the children in grades 3 through 5 were sampled at a lower sampling rate than the students in grades 6 through 12, and the parents of the younger children were asked only a subset of the items asked of parents in the higher grades. In addition, youths enrolled in grades 6 through 12 were subsampled and interviewed, provided the parent interview for the youth was already completed.

All members of households with children 18 years of age or younger or with children enrolled in 12th grade or below and 20 years old or younger were enumerated. The appropriate respondent for the parent component of the SS&D component or the SR interview was identified for each sampled child; the respondent was the parent or guardian who knew the most about the child's care and education. The respondent for the youth SS&D interview was the sampled youth.

The NHES:93 covered the noninstitutionalized civilian population of persons from age 3 through those enrolled in 12th grade and their parent respondents in the United States. Since only persons in telephone households were surveyed, the estimates were adjusted so that the totals were consistent with the total number of persons in both telephone and nontelephone households. The User's Manuals for the SS&D and SR data files contain more information on the methods used to process the interview data and develop the estimates (Brick et al. 1994a, 1994b).

Table 1 summarizes the response and completion rates from the NHES:93. All of the estimated response rates are weighted using the probabilities of selection. Screening interviews were completed with 63,844 households, with an estimated response rate of 82 percent. A total of 10,117 SS&D parent interviews about youths enrolled in grades 6 through 12 were completed for a completion rate of 90 percent and an overall response rate of 74 percent; corresponding rates for the parents of 3rd to 5th graders were 89 percent and 74 percent, respectively. There were also 6,504 completed interviews for the youth enrolled in grades 6 through 12, for a completion rate of 83 percent and an overall response rate of 68 percent. The lower response rate for the youth was largely due to the need to complete the parent interview and obtain the consent of the parent before interviewing the youth. A total of 10,888 SR interviews were completed, resulting in a 90 percent completion rate. The overall response rate (the Screener response rate multiplied by the SR completion rate) for the SR interviews was 74 percent.

Table 1.—Weighted completion and response rates for the NHES:93, by survey component

Component	Number of interviews sampled	Number of interviews completed	Weighted completion rate[a]	Weighted response rate[b]
Households	76,093	63,844	82.1%	82.1%
School Safety & Discipline interview				
parents of 3rd to 5th graders	2,882	2,563	89.4	73.4
parents of 6th to 12th graders	11,650	10,117	89.6	73.6
6th to 12th graders	8,066	6,504	83.0	68.1
School Readiness interview	12,905	10,888	89.6	73.6

[a]The completion rate is the percent of eligible respondents at the particular phase of the survey divided by the number of eligible sampled persons.
[b]The response rate is the overall percent of completed interviews; it is the screener response rate multiplied by the completion rate for the extended interview.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Reinterview Design

As noted earlier, reinterviews with the respondents to the original interview were intended to supply data about the reliability of their responses. A random sample of parent and youth respondents to completed interviews was selected to accomplish this objective. However, not all interviews were eligible for a reinterview.

A household and the interviews within the household were eligible for sampling for reinterview once all of the SS&D and SR interviews in the household was completed. If some of the interviews in the household were not completed even though others were, then none of the interviews in the household was eligible for reinterview sampling. This occurred most often when the sampled person could not be contacted at a convenient time to complete the interview. This restriction in the sample was implemented to prevent the reinterviewing from disrupting the completion of the original interviews.

Another exclusion for the reinterview sampling involved refusal and language problem cases. If the respondent initially refused to complete the original interview but later completed the interview in refusal conversion, the interview was not eligible for reinterview sampling. Similarly, if the original interview was coded as a language problem case but later completed (perhaps by a bilingual interviewer), the case was excluded from reinterview sampling. This restriction was at the household level rather than at the individual interview level; i.e., if any interview in the household was a refusal or language problem case, then the household was not eligible for sampling.

In all, 22 percent of households were excluded from the reinterview sampling for these reasons. Most of the exclusions (16.2% of the households) were because not all the interviews in the household had been completed. The other (6.0%) households were excluded because of the refusal and language problem restrictions.

The only other restriction in the sample for the reinterviews was the exclusion of interviews for children with circumstances that were so different that they did not follow the normal interview patterns. In particular, parents of 62 children who were being educated in home school, originally respondents in the SR interview, and 77 youth who were not living with a parent or guardian (called emancipated youth), originally respondents in the SS&D, were not eligible for the reinterview. Since there were so few of these interviews and the questions asked in these interviews were different from the other interviews, these interviews were excluded from the reinterview. All exclusions were made prior to sampling for the reinterview.

Because of the restrictions in reinterview sampling, the results of the reinterview program should not be generalized to all respondents. However, there is value in examining reinterview results for those who were eligible for sampling.

Once the household and the interviews within the household became eligible for reinterview, specific interviews were sampled. The sampling for reinterview was not done until at least 2 weeks after all original interviews in the household were finalized, although this time restriction was relaxed at the end of the data collection period so that all eligible households had an opportunity to be sampled.

To limit the burden on a household, no more than one case was sampled for reinterview from the same household, although any of the completed interviews in the household could have been sampled for the reinterview. The target sample size for the reinterview was set for each type of interview in the NHES:93: for parents of 3rd to 5th graders, the goal was 250 completed reinterviews; for parents of 6th to 12th graders, the goal was 250 completed reinterviews; for 6th to 12th graders, 500 completed reinterviews; and for the SR, the goal was 1,000 completed reinterviews. These target sample sizes were set after reviewing the results of the NHES:91 reinterview (Brick and West 1992) and determining that sample sizes of more than 500 completed reinterviews were needed to assess more detailed characteristics. Thus, sample sizes of 1,000 completed reinterviews were assigned to both the SS&D and SR components in order to allow for the fact that subgroups were of interest in the analysis and that some items of interest were subgroup-specific, especially in the SR interview. The interviews were sampled within household at the same rate for each type of interview to achieve the desired sampling rate.

A sample of 2,108 cases was selected for reinterview, and 1,879 cases were completed for an unweighted completion rate of 89.1 percent. Table 2 shows the number of cases sampled for reinterviews, the number of those that resulted in completed reinterviews, and the unweighted completion rate by the type of interview. The completion rates are uniformly high, ranging from 88 percent to 90 percent.

Table 2.—Reinterview sample sizes, completed interviews, and unweighted completion rates, by major path

Major path	Completed original interviews	Reinterview sample size	Completed reinterviews	Unweighted reinterview completion rate
All	30,072	2,108	1,879	89.1%
SS&D				
parents of 3rd to 5th graders	2,563	256	227	88.7
parents of 6th to 12th graders	10,117	315	277	87.9
6th to 12th graders	6,504	560	493	88.0
SR	10,888	977	882	90.3

SOURCE U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

The main reason for not completing the reinterview was the inability of interviewers to contact the respondent during the reinterview time period. This includes never making contact with the respondent, reaching a disconnected phone or phone number that had been changed, and attempting to reach someone who had moved to a new household with no telephone or no forwarding number. Only about one-third (one-quarter for youth respondents) of the nonresponse was due to refusals to participate in the reinterview. If the respondent refused, no further efforts were made to complete the reinterview.

As noted above, the reinterview was originally designed to be conducted at least 2 weeks after the completion of the original interview. Table 3 shows the actual number of days between the original interview and the reinterview for each type of respondent. About 40 percent of the reinterviews were conducted between 2 and 4 weeks from the date the original interview was completed. It took longer than 4 weeks to complete many reinterviews because all extended interviews in a household had to be completed before sampling for the reinterview. In addition, about 9 percent of the reinterviews were completed less than 15 days after the original interview because the time between the reinterview and the original interview was shortened at the end of the data collection period. Bailar (1968) discusses how the time between the interview and reinterview might influence the estimates, but no analysis of this effect has been done with these data because of the relatively small number of reinterviews completed for each type of respondent.

The reinterview was conducted using the same CATI system used in the original interview, modified to display the reinterview items. The interviewers read identical items to the same parent/guardian or youth who completed the original interview. No substitutions were allowed for the original respondent. For the SR component, 83 percent of the respondents were the child's mother, 14 percent were the child's father, and the remaining 3 percent were other persons such as grandparents, stepparents, or guardians. For the SS&D parent interviews, 80 percent of the respondents were the youth's mother, 16 percent were the youth's father, and 4 percent were other persons. The youth sampled as the subject of the SS&D percent interview was the respondent for the youth interview.

Table 3.—Number of days between completion of original interview and reinterview

Number of days	Total		SS&D Parents of 3rd to 5th graders		SS&D Parents of 6th to 12th graders		SS&D 6th through 12th graders		SR	
	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.	Number	Pct.
Total	1,879	100	227	100	277	100	493	100	882	100
Less than 8	30	2	2	1	0	0	15	3	13	1
8 to 14	131	7	11	5	23	8	47	10	50	6
15 to 21	234	12	36	11	26	9	67	14	105	12
22 to 28	519	28	61	27	72	26	163	33	223	25
29 to 35	297	16	28	16	48	17	64	13	157	18
36 to 42	363	19	52	23	52	19	78	16	181	21
43 to 49	160	9	20	9	23	8	34	7	83	9
50 or more	145	8	17	7	33	12	25	5	70	8

NOTE: Percentages may not sum to 100 because of rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

After all of the items for the reinterview were asked, the original and reinterview responses were compared automatically by the computer for a subset of items. We refer to this process as reconciliation. Reconciliation was conducted for items in the SS&D reinterviews that concerned school environment, drug/alcohol education and use, and incidents of victimization at school. In the SR reinterviews, reconciliation was conducted for a subset of items -- those associated with early childhood program participation, children receiving help in school, and events in the previous week. Items were selected because they were new to the NHES and no previous information on their response variability was available or because they were key indicators for young children, e.g., reading or preschool participation.

Up to the point of reconciliation, the interviewer was unaware of the responses given by the respondent in the original interview. For any of the selected items that had different responses in the original and reinterview surveys, a reconciliation screen appeared and the interviewer asked the respondent which answer was best. A typical screen used to resolve the differences is shown in Exhibit 1.

Exhibit 1. — Typical CATI reconciliation screen

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We asked you if {child's} school has a written discipline policy. One time we recorded YES and one time we recorded NO. What is the best answer?

( )

1. YES
2. NO

Analysis Methods

Several statistics have been developed to examine various aspects of the reliability of reporting using original reinterview responses. Three of these statistics used for most of the analysis of the responses from the NHES:93 in this report are the gross difference rate, the net difference rate, and the index of inconsistency. In addition, three other statistics used in the report are the correlation coefficient, the percent agreement, and the agreement ratio. All six statistics are described below.

The *gross difference rate* for a binary variable is the percentage of items with different responses in the two interviews. Thus, it is an estimate of the reliability or consistency of reporting. The *net difference rate* takes account of offsetting misclassifications. When the reinterview is error free, then the net difference rate estimates the bias in the estimate. The *index of inconsistency* is a less familiar statistic that is a relative measure of response variability. In circumstances described later, the index can be used to measure the proportion of the total variability that arises due to random response error (U.S. Department of Commerce 1968; Forsman and Schreiner 1991).

These statistics are typically computed based on the number of sample cases reported as having a particular characteristic in the original survey and in the reinterview. This approach is valid for simple random sampling or when the goal of the analysis is to evaluate and quantify response variability of the population of survey respondents. When the goal is to provide estimates of response variability of the national estimates, it is more appropriate to estimate these statistics using weights that adjust for the probability of selection. Since this was a main objective of the NHES:93 reinterview, the weight for each completed interview developed for the analysis of the original interview was used for all the analysis in this report. No additional adjustments to the weights were made to account for sampling or nonresponse in the reinterview. The sampling errors of all the estimates were computed using a replication method. The full sample and replicate weights are described in the NHES:93 User's Manuals (Brick et al. 1994b, 1994c).

Table 4 shows the general format of the possible reporting outcomes from the original and reinterviews when the item has only two possible values. From tables formatted in this fashion, it is possible to estimate several characteristics relevant to the consistency of the reporting between the original survey and the reinterview. For example, the off-diagonal cells estimate the proportion of responses that were reported differently in the original interview and the reinterview. Since the statistics computed in this report are based on weighted data,* the values in the cells are actually weighted sums of the number of cases rather than the raw number of cases. The definitions of the statistics used in this report are given below, where the cell counts are the estimated totals.

Gross Difference Rate. The gross difference is equal to the weighted percentage of cases reported differently in the original interview and the reinterview. The gross difference rate is the ratio of the gross difference divided by the estimated total number of cases. The gross difference rate can be written algebraically as

$$G = \frac{\sum w_i \left(x_{1i} - x_{2i}\right)^2}{\sum w_i} \qquad (1)$$

where x_{1i} is the response to the original interview for case i, x_{2i} is the response to the reinterview for case i, and w_i is the original interview weight for case i, described above. Thus, the gross difference rate is the average squared difference between the responses.

* If either the original response or the reinterview response was missing for an individual item, the statistics were computed excluding the case. Imputed values were not used in this report. Since the item response rate was very high for both the interview and the reinterview, the exclusion of the missing values was not a significant problem.

For characteristics that have exactly two possible outcomes, the gross difference rate can be written as a percentage using the terms from Table 4 as

$$G\% = 100\,\frac{b+c}{n}. \qquad (2)$$

This can easily be seen to be a special case of (1) where the x_i terms only take on the values of 0 or 1. For binary data, it is clear from (2) that the gross difference rate is an estimate of the percentage of cases not reported the same in both interviews, i.e., those falling in the off-diagonal cells.

For items with more than two nominal response categories, several options are available. One is to simply make the responses binary by collapsing the response categories to form a dichotomy. For example, in this report, response categories concerning whether the child was challenged at school were collapsed from 5 response categories to two.

Another alternative is to create sets of new binary variables corresponding to each of the response categories of the original item. For example, if there are three response categories (*a*, *b*, and *c*), then new variables could be created such that the first new variable has the value '1' if the response to the original variable is category '*a*' and it is '0' otherwise; the second new variable has the value '1' if and only if the response to the original variable is category '*b*.' The first option was used in this report because creating multiple variables often resulted in having a small percentage of the sampled cases in one of the categories, which, as discussed below, adds complexity to the analysis. The response categories that were collapsed for the reinterview analysis are noted on the reinterview questionnaires in the appendix.

Table 4.—General format of interview-reinterview results

Reinterview	Original interview: Number of cases with characteristic	Original interview: Number of cases without characteristic	Total
Number of cases with a characteristic	a	b	a + b
Number of cases without a characteristic	c	d	c + d
Total	a + c	b + d	n = a + b + c + d

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

The gross difference rate divided by 2 is an estimate of the response variance for an item where response variance is defined as the variation associated with the responses to the same item when the survey is repeated under the same general conditions. In essence, this means that the interview and reinterview responses are independent of each other and the other factors that affect the responses

are the same for both interviews so that the responses have the same distribution. Forsman and Schreiner (1991) discuss these assumptions in more detail.

To aid in the presentation of the gross difference rates, the following general rule is used to categorize the response variance as measured by the gross difference rate:

- A gross difference rate of less than 10 percent is low response variance;
- A gross difference rate between 10 and 20 percent is moderate response variance; and
- A gross difference rate above 20 percent is high response variance.

This rule was developed using the gross difference for a binary variable as a guide. Thus, a low gross difference rate means that fewer than 10 percent of the respondents are misclassified; a moderate rate means between 10 and 20 percent are misclassified; and a high rate means more than 20 percent of the respondents are classified differently in the original and reinterview.

Since the gross difference rate is an absolute measure of the measurement error, this rule does not account for the fact that 5 percent misclassified is a much more serious response problem for a 1 percent statistic than a 50 percent statistic. To account for the relative size of the estimate, the rule stated above is only applied to estimates between 20 and 80 percent. Outside of this range, the gross difference rate and other measures of data quality should be considered with respect to the size of the estimate.

Net Difference Rate. As with the gross difference rate, the net difference rate can be computed for both continuous variables and those that have only two values. The net difference rate for a continuous variable is

$$N = \frac{\sum w_i (x_{1i} - x_{2i})}{\sum w_i} \qquad (3)$$

where the variables are defined as in (1). The net difference rate is thus the average difference between the original and reinterview.

For the binary case, the net difference is the difference between the weighted count of cases with a characteristic as reported in the original interview and the weighted count of cases in the reinterview. That is, $(a + c) - (a + b) = c-b$, using the terms in Table 4. While the gross difference includes differences in both directions, the net difference is the nonoffsetting part of the gross difference. The net difference rate, expressed as a percentage, is

$$N\% = 100\,\frac{c-b}{n}. \qquad (4)$$

If the reinterview response is the "true" value, then the net difference rate is an estimate of the response bias of the estimate. Generally speaking, this was not the case in the NHES:93 since the reinterview responses were collected under the same general conditions as the original interview. The reinterviews were conducted by regular NHES:93 interviewers, that is, those who had conducted the original interviews. No control was implemented to prevent an interviewer from conducting both the original interview and the reinterview with the same respondent. However, given the number of interviews conducted in the NHES:93 and the size of the interviewing staff (about 300), it is unlikely that this occurred often, if at all. No changes were made in the interview itself other than eliminating some of the items, and the respondents were the same for both interviews. As a result, there is no reason to assume that the reinterview responses are closer to the "true" values than are the original interview responses.

Even though the net difference rate computed using the original and unreconciled responses is generally not a valid estimate of response bias, it can be used to evaluate one of the assumptions under which the gross difference rate is a valid estimate of response variance. As noted above, if the reinterview is an independent replication of the original interview, then the gross difference rate divided by 2 is an unbiased estimate of the simple response variance. The net difference rate computed from the unreconciled reinterview data can be used to examine whether the two interviews result in similar distributions. If the two interviews are independent, then the expected value of the net difference rate should be equal to 0. Biemer and Forsman (1992) give more details on this. The net difference rate computed from the original and unreconciled responses is used later to evaluate this assumption.

The net difference rate computed from the original and the reconciled responses is sometimes used to estimate response bias. Reconciliation is an explicit effort to discover a more accurate response to the interview question. Typically, the interviewers doing the reconciliation are supervisors or more highly trained individuals who are expected to obtain more precise responses. Brick and West (1992) found that there was no evidence that reconciled responses were more accurate than the original responses in circumstances very similar to those in the NHES:93. Part of the reason for that finding may be related to the use of the same interviewer pool for conducting the interview and the reinterview. Forsman and Schreiner (1991) discuss the conditions under which reconciled reinterviews may be treated as providing valid estimates of response bias. Despite concerns about the assumption that the reconciled response is more accurate than the other responses, the net difference rates computed from the original and the reconciled reinterview values are the only measures of response bias available from this study and are presented later with the other estimates from the study.

Index of Inconsistency. The index of inconsistency is the ratio of the variance of response errors to the total variance of the statistic. For continuous variables, the index of inconsistency is

$$I = \frac{G}{s_1^2 + s_2^2} \qquad (5)$$

where G is the gross difference rate defined above for continuous variables, s_1^2 is the sample variance for the original interview, and s_2^2 is the sample variance for the reinterview. For binary data, the index can be expressed as a percentage as

$$I\% = 100\frac{b+c}{2np(1-p)} \qquad (6)$$

where $p = \frac{a+c}{n}$.

The index was originally developed as a way of evaluating the proportion of total variability contributed by random response error. As noted earlier, the gross difference rate (1) divided by 2 is an unbiased estimate of the simple response variance if the observations from the two interviews are independent and identically distributed (Biemer and Stokes 1991). The index of inconsistency is therefore a ratio of the simple response variance and total variance of the estimate. In (6), the quantity $p(1\text{-}p)$ is an estimate of the total variance for a binary variable.

It should be recognized that the index of inconsistency (6) can take on values greater than 100. This can happen because the response variance may actually reduce the overall variability in the estimate. Hansen, Hurwitz, and Pritzker (1964) showed precisely this phenomenon for a binary random variable.

It is possible, and even likely, that the responses to the reinterview may be affected in some ways by the original interview experience. This conditioning of respondents means that the assumption of independent and identically distributed responses to the interviews may not be fully satisfied. Nevertheless, the index is a valuable measure of the relationship between response error and sampling error. For this reason, the index of inconsistency is used in the analysis of the NHES:93 reinterview data.

The index of inconsistency is a relative measure since the gross difference rate (an absolute measure) is divided by a term that depends on the variance of the estimate. Note that as the estimated percentage in the category (p) becomes extreme (close to 0 or 1), then the denominator of the index becomes very small. As a result, even a small gross difference rate can result in a very large index. For example, assuming a constant value for the gross difference rate, the value of I differs by a factor of about 25 when the value of p varies from 1 percent to 50 percent. Thus, the index is most useful for estimates of characteristics between 20 and 80 percent because in this range the quantity $p(1\text{-}p)$ is relatively constant, varying only between 16 and 25 percent.

For estimates of characteristics that are between 20 and 80 percent, a useful rule for interpreting the index is given below:

- An index of less than 20 is low relative response variance;
- An index between 20 and 45 is moderate relative response variance; and
- An index above 45 is high relative response variance.

This rule was used previously in the NHES:91 (Brick and West 1992) and a similar classification was used by Bushery, Royce, and Kasprzyk (1992). Bushery, Royce, and Kasprzyk classified an index between 20 and 50 percent as moderate. The classification scheme given above is used for all the items for both the SS&D and the SR components of the NHES:93. The index is not used to compare reliability across items for estimated percentages outside the 20 to 80 percent range.

Other Statistics. Two other statistics that are sometimes used to assess the reliability of responses with reinterview data are the *correlation coefficient* and the *percent agreement*. These statistics are presented with the tables for those analysts who are familiar with these measures. The *agreement ratio* is the third additional statistic used in this report.

The Pearson correlation coefficient is the ordinary correlation computed for continuous variables. The estimated correlation between the original and reinterview responses is

$$\hat{\rho} = \frac{\sum (x_{1i} - \bar{x}_1)(x_{2i} - \bar{x}_2)}{\sqrt{\sum (x_{1i} - \bar{x}_1)^2 \sum (x_{2i} - \bar{x}_2)^2}} \qquad (7)$$

where the variables are defined as in (1). Note that the correlation coefficient is unweighted. While a weighted version of the statistic could be used, the unweighted correlation has been used in most published reports when this statistic is used. The correlation coefficient ranges between positive and negative 1. A value near positive or negative 1 shows a strong linear relationship between the variables and a value of 0 shows no linear relationship. In reinterview studies, a high positive linear relationship between the original and reinterview is indicative of consistent reporting of the item.

Another measurement statistic that is sometimes used for binary variables is the percent agreement. The percent agreement for binary variables is

$$PA = 100\frac{a+d}{n} \qquad (8)$$

where the values of a, d, and n are taken from Table 4. This statistic is the weighted percent of all observations that are reported the same in both the interview and reinterview. This statistic is sometimes called the index of crude agreement (Forsman and Schreiner 1991) and is the complement of the gross difference rate for binary variables.

The last statistic used in this report is called the agreement ratio. It is the ratio of the percent agreement computed using unreconciled and reconciled reinterview responses to the percent agreement computed using original and reconciled data. This statistic can be written as

$$AR = \frac{PA_2}{PA_1} \qquad (9)$$

where PA_1 is the percent agreement of the unreconciled and reconciled responses and PA_2 is the percent agreement of the original and reconciled responses.

For example, suppose that 90 percent of the responses to an item were the same for the original and reinterview. Of the 10 percent with differences, suppose that in 8 percent of the cases the reconciled response was the same as the unreconciled response while in the remaining 2 percent the reconciled response was the same as the original interview. The agreement ratio for this example would be 4 (8% ÷ 2%). The agreement ratio indicates whether the reconciled values were more consistent with the original or the unreconciled reinterview response. An agreement ratio greater than 1.0 means that a greater percent of the reconciled responses agreed with the unreconciled reinterview response than with the original interview.

Index of Inconsistency and Correlation

The statistics used to estimate the reliability of the data from the NHES:93 are based on what Biemer and Stokes (1991) call the survey research terminology. Some of these statistics may be less familiar to analysts coming from other backgrounds. The authors discuss the relationships between these statistics and the terms used in different disciplines for similar concepts.

The index of inconsistency is perhaps the most difficult statistic to appreciate for those not familiar with the survey research terminology. Fortunately, the index is related to a much better known statistic, the Pearson correlation coefficient. Since most of the variables in the NHES:93 are binary, the relationship between the two statistics is examined below for binary variables.

For a binary variable, the correlation coefficient given in (7) can be written using the terms from Table 4 as

$$\hat{\rho} = \frac{a - \frac{(a+c)(a+b)}{n}}{n\sqrt{\frac{(a+c)}{n}\left(1-\frac{(a+c)}{n}\right)\left(\frac{(a+b)}{n}\right)\left(1-\frac{(a+b)}{n}\right)}} = \frac{a - npp'}{n\sqrt{p(1-p)(p'(1-p')}} \qquad (10)$$

where $p = \frac{a+c}{n}$ and $p' = \frac{a+b}{n}$.

The similarity between the index (6) and the correlation expressed in this fashion is now more apparent. The denominators of both (6) and (10) are variance terms. If the proportion of cases with the characteristic are approximately the same in the original interviews (p) and the reinterview (p'), then the denominators are equal.

In fact, if the reinterview is a replication of the original interview (e.g., the samples are independent and have the same distribution) then the relationship is very simple and direct. Under these conditions, $p = p'$ and the index of inconsistency equals one minus the correlation coefficient, if simple random sampling is used.

The numerators of the two statistics are closely related, but not identical. To show the relationship more clearly, one can express the numerator of the index (6) as

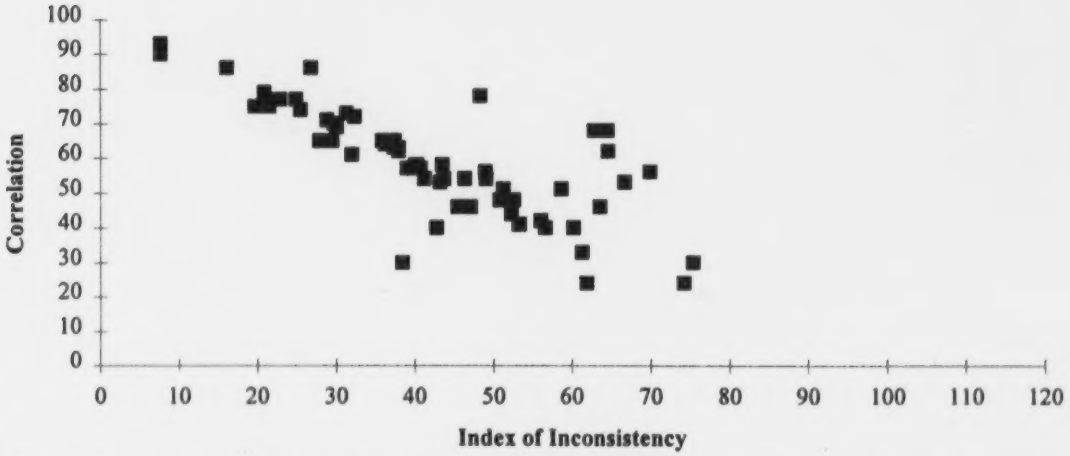
$$\frac{b+c}{n} = -\left\{a - n\frac{(p+p')}{2}\right\}. \qquad (11)$$

The numerators of both the index and the correlation coefficient are the a term from Table 4 minus a term involving the proportions of cases having the characteristic in the interview and reinterview. The terms being subtracted are different for the two statistics; for the index the term subtracted is of the same magnitude as p, while for the correlation the term subtracted is the magnitude of p^2. Nevertheless, the two statistics are often highly correlated. The correlation is negative because of the negative term in (11).

The relationship can be seen by examining some graphs of the statistics computed from the NHES:93. Figures 1 through 4 are plots of the index of inconsistency and the correlation for the SR and the three different categories of respondents from the SS&D. In all cases, the relationship is nearly linear and negative. This relationship holds even in the tails of the distribution below 20 percent and above 80 percent. The correlation was computed from unweighted data while the index was computed from weighted data, since these are the ways the statistics are commonly reported in the analysis of reinterview data. These figures show that users familiar with the correlation can, for practical purposes, consider the index of inconsistency a different parameterization of the correlation coefficient for the NHES:93 data. To aid these users, correlations are reported in the tables of findings.

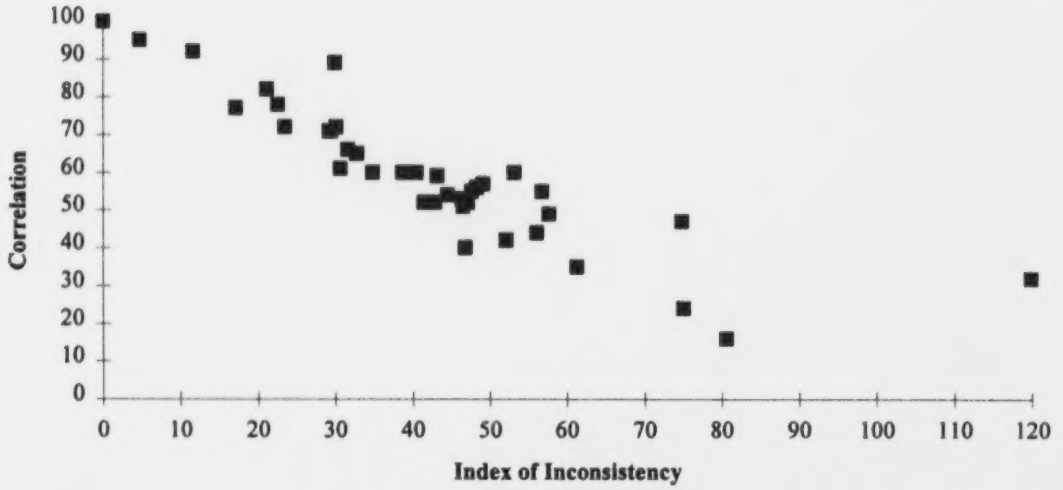
In contrast, the gross difference rate is an absolute measure of response variance and is not expected to have a linear relationship with the correlation. Figure 5 is a scattergram of the gross difference rate and the correlation for the items in the SR reinterview. As expected, the relationship is not linear. Scattergrams for the SS&D respondents (not shown) are similar.

Figure 1.--Scattergram of the index of inconsistency and the correlation for the SR reinterview



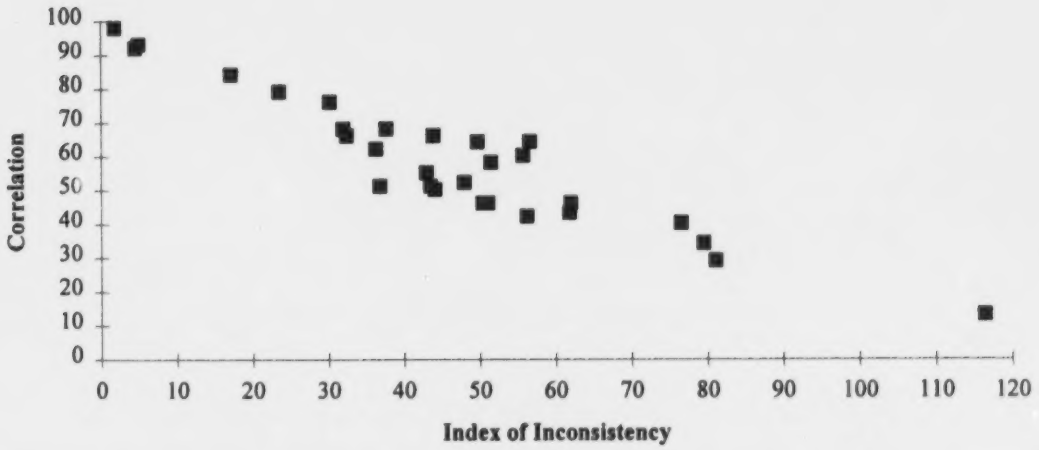
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Figure 2.--Scattergram of the index of inconsistency and the correlation for parents of 6th to 12th graders in the SS&D reinterview



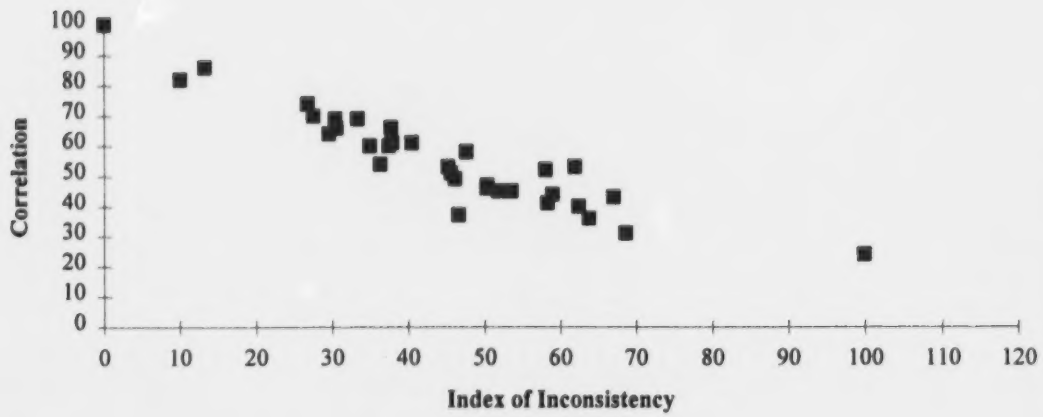
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Figure 3.--Scattergram of the index of inconsistency and the correlation for parents of 3rd to 5th graders in the SS&D reinterview



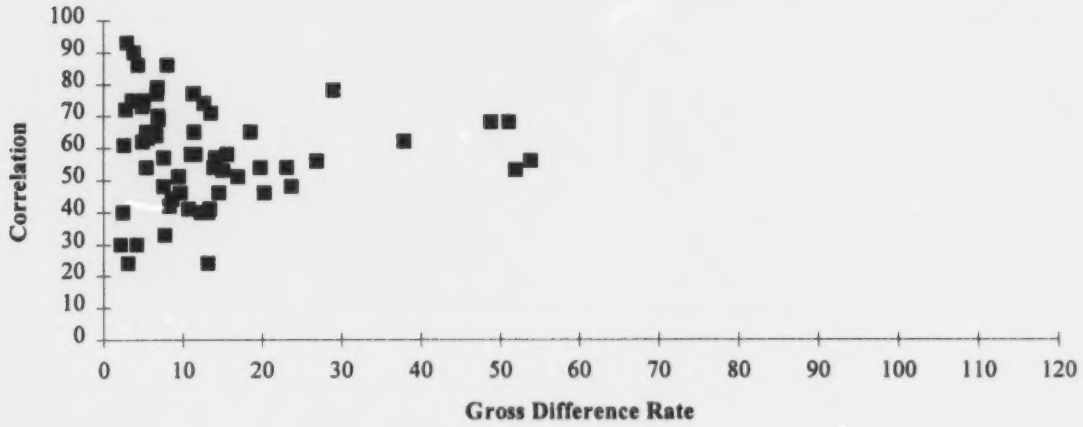
SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Figure 4.--Scattergram of the index of inconsistency and the correlation for 6th to 12th graders in the SS&D reinterview



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Figure 5.--Scattergram of the gross difference rate and the correlation for the SR reinterview



SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Measurement Errors in the NHES:93

The statistics described above are now used to evaluate measurement errors for the SS&D and SR components of the NHES:93. For both components, only items that were answered by 10 or more respondents in both the original and reinterview are included. Since the primary goal of the reinterview was to assess response variance, the gross difference rates and indexes of inconsistency are given first, followed by net difference rates as estimates of response bias. In the analysis of the reliability of the SR items, the reliability for two composite variables from the SR are examined and compared to the reliability of the separate items. Some methodological issues associated with the reconciliation process and the validity of the measures of response variance and bias from the reinterview are then examined.

Response Variability in the SS&D Component

Three statistics measuring response variability, the gross difference rate, the index of inconsistency, and the Pearson correlation coefficient, were computed for each item in the SS&D survey. Because many items were included in the reinterview, four groupings of items are used to present these statistics in a more meaningful manner. The groupings are items about the general environment of the school, drug and alcohol education, drug and alcohol use (these were not asked for parents of 3rd to 5th graders), and incidents related to safety and discipline.

Table 5 uses these groupings to summarizes the response variability statistics computed for the SS&D. Detailed tables that present the statistics for each item follow: Table 6 shows the statistics for parents of 3rd to 5th graders; table 7 shows the statistics for parents of 6th to 12th graders; and table 8 shows the estimates for 6th to 12th graders. Standard errors for the gross difference rate and index of inconsistency are included in the detailed tables along with the estimated percentage of respondents in the first response category for each item in the original interview. The wording of items in the SS&D interviews were not always identical for parents and youth (see the questionnaire in the appendix). For items concerning incidents at school, parents were asked "have you heard of ..." and youth were asked "do you know of..." Wording for items concerning the presence of drugs and alcohol also varied in this way. Similarly, for the question on safety measures at school, parents were asked, "do you know if (child's) school...," whereas youth were asked, "does your school..." These variations in wording were developed to recognize distinctions between first-hand and second-hand knowledge by parents and students.

As shown in Table 5, the median gross difference rates and the indexes of inconsistency are smaller for the general environment items than for the other groupings of items. The median gross difference rates for the general environment items are 10 percent or less, while the median rates for the other groupings are in the range of 12 to 25 percent.

The median values of the response variance statistics for each grouping are of roughly the same magnitude for all three types of respondents. In particular, the median gross difference rates and indexes of inconsistency for the parents of 6th through 12th graders and the 6th through 12th graders themselves are comparable. This is important because there was concern that 6th through 12th graders might not be very reliable respondents. The consistency between their measurement error statistics and those for their parents shows that neither type of respondent was more reliable than the other for these items.

Several hypotheses could explain the relatively high response variability for the items about incidents. One possibility is that respondents may not have been sure about the specific intent of the questions and their answers may have reflected this ambiguity. Another possibility is that the high variability for these items may be related to the task the respondent was asked to perform. The respondent was required to remember if a specific incident occurred and, if so, whether the event happened within the past 12

months. This may be a more difficult cognitive task than is required for other items that only ask whether or not an event happened. Yet another possibility is that some of these events are related to the time of the interview and the reinterview may be collecting information on incidents that occurred after the original interview, for example, a high-profile crime at a school.

Table 5.—Summary of gross difference rates, indexes of inconsistency, and correlations based on original and unreconciled reinterview responses from the SS&D, by groupings of items

Type of respondent and item	Number of estimates	Median gross difference rate	Median index of inconsistency	Median correlation
Parents of 3rd through 5th graders				
General environment items	13	5.8	32.4	.68
Drug and alcohol education items	5	24.1	50.4	.46
Incidents	10	22.0	56.2	.49
Parents of 6th through 12th graders				
General environment items	16	8.0	30.4	.68
Drug and alcohol education items	5	22.2	46.5	.51
Drug and alcohol use items	3	11.6	47.1	.52
Incidents	15	18.9	44.5	.57
6th through 12th graders				
General environment items	8	10.1	35.7	.57
Drug and alcohol education items	4	25.4	52.8	.45
Drug and alcohol use items	3	12.1	30.6	.69
Incidents	21	16.3	46.4	.56

NOTES: Gross difference rates less than 10 are considered Low, between 10 and 20 are Moderate, and greater than 20 are High. Indexes of inconsistency less than 20 are considered Low, between 20 and 45 are Moderate, and greater than 45 are High. The indexes of inconsistency for estimates outside the range of 20 and 80 percent are generally not comparable.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Another hypothesis is that many of the incidents, drug and alcohol education, and drug and alcohol use items were subject to comprehension problems that did not affect the items in the general environment grouping. Since both the parents and youth responded with about the same level of consistency, the issue is the ability of respondents to consistently interpret the intent of the items rather than a more basic concern about whether or not the respondents understood the words used in the interview. For example, respondents may have had a vague idea of what was meant by bullying and not responded consistently because they comprehended the item differently when asked twice. This is more a question of respondents interpreting the meaning of the word "bullying" consistently rather than understanding it.

A general finding that helps summarize the analysis for the statistics in the detailed tables is that the index of inconsistency tends to be high when the gross difference rate is high. In a few cases the index is high when the gross difference rate is low or moderate, but this is usually because the estimated percentage is extreme (close to 0 or 100 percent). As noted earlier, these extreme percentages correspond to the situations in which the gross difference rate, the index of inconsistency, and the correlation coefficient may not be as useful for comparison purposes. In the tables of the individual items for the SS&D, a low value for one of the statistics and a high value for the other estimate occurs only eight times. In all eight cases, the estimated percentage is less than 10 percent or greater than 88 percent.

Parents of 3rd to 5th Graders. The response variance statistics for items completed by parents of 3rd to 5th graders are shown in Table 6. The estimates for the general environment items are generally low. For the 13 general environment items, none of the gross difference rates is high, and only 2 are moderate. The indexes of inconsistency for these items also indicate no significant problems: 2 of the 13 are high, 7 are moderate, and 4 are low. The two indexes of inconsistency that are high have estimated percentages greater than 90 percent.

The alcohol and drug education items have high estimates of response variance. Three of the five alcohol and drug education items have high gross difference rates and indexes of inconsistency and the remaining two items have moderate estimates. For the questions about incidents, 3 of the 10 items have low gross difference rates, 1 has a moderate gross difference rate, and 6 have high gross difference rates. The indexes of inconsistency for the 8 items with percentages in the 20 to 80 percent range are high for 6 of the items and moderate for 2. The 6 items with both a high gross difference rate and index of inconsistency are incidents of stealing that happened to the child (SSTEYOU), bullying and bullying that happened to the child (SSBULLY, SSBULYOU), physical attacks or fights the child saw or happened to the child (SSATTSEE, SSATTYOU), and interference with learning (SSINCDNT).

Parents of 6th to 12th Graders. Table 7 presents the response variance statistics for the interviews with the parents of 6th to 12th graders. The patterns are similar to those of parents of 3rd to 5th graders and the general statements hold quite well for these respondents. Of the 16 general environment items, none has high gross difference rates and 9 have low gross difference rates. Of the 5 items with a high index of inconsistency, none is for estimated percentages in the range of 20 to 80 percent.

All three items about drug and alcohol usage have moderate gross difference rates and the five items on alcohol and drug education have either moderate or high gross difference rates. The indexes of inconsistency for those items with an estimate in the 20 to 80 percent range for both groupings of items are either moderate or high.

The estimates for the items in the incidents grouping are generally large. Only 3 of the 15 items have low gross difference rates, 7 have moderate gross difference rates, and 5 have high gross difference rates. None of the items has a low index of inconsistency, while 7 of the 12 items with estimated percentages in the 20 to 80 percent range have moderate indexes, and 5 have high indexes. The incidents items with both a high gross difference rate and index of inconsistency are those about the child's witnessing incidents of robbery, bullying, and physical attacks on others (SSFORSEE, SSBULSEE, SSATTSEE) and the item about the impact the incidents had on the learning environment (SSINCDNT).

Sixth to 12th Graders. Interviewing children as young as 11 years was considered a more difficult task than interviewing adults. Consequently, extensive testing of the wording of the questions was undertaken prior to the survey to help avoid problems, especially for interviews with the younger children. As noted earlier, it is interesting that the general pattern and size of the measurement error statistics for the 6th through 12th graders is consistent with that for parents.

Table 6.—Estimates of gross difference rates, indexes of inconsistency and correlations from SS&D reinterviews of parents of 3rd to 5th graders

Question*		Sample size	Estimated percent	Gross difference rate			Index of inconsistency			Correlation
				Estimate	S.E.	Level	Estimate	S.E.	Level	
General Environment										
SCPUBLIC	P10-Public/private school	227	88	0.4	0.4	Low	1.9	1.9	Low	.98
SCASSIGN	P11-Assigned or chosen school	188	88	3.7	1.8	Low	17.2	8.4	Low	.84
SCFIRST	P17-1st yr attended this school	227	20	1.6	0.9	Low	5.0	2.6	Low	.93
SCSTUD	P18-# students in child's school	204	71	13.4	2.2	Mod	31.9	5.7	Mod	.68
SECHALNG	PY21a-Child challenged/school	226	87	9.8	2.5	Low	43.5	9.5	Mod	.51
SEPRIDIS	PY21e-Principal maintains disc.	227	94	5.8	2.0	Low	49.7	19.6	High	.64
SEMISBEH	P25-Misbehavior interfered/learn.	226	24	13.3	2.5	Mod	36.8	7.2	Mod	.51
SSGUARDS	PY55a-School has guards	218	10	4.4	1.8	Low	23.5	8.1	Mod	.79
SDPOLICY	PY56-Sch. has written disc. policy	214	92	5.2	1.9	Low	44.1	7.6	Mod	.50
SDDRUGS	PY59-Policy covers drugs	171	82	8.0	2.3	Low	32.4	8.9	Mod	.66
FCSTDS	P83c-Satisfied w/academic standards	227	96	6.1	1.5	Low	79.5	28.1	High	.34
FCORDER	P83d-Satisfied with discipline	227	91	6.1	2.1	Low	37.7	11.5	Mod	.68
FCMEETNG	P89a-Parents attd. gen. schl. meeting	226	91	0.8	0.5	Low	4.6	3.0	Low	.92
Drug/Alcohol Education										
EDDRUGS	P67-Child has drug education	206	73	17.1	3.2	Mod	42.9	7.5	Mod	.55
EDCOURSE	PY68b-Drug ed/special course	128	58	27.7	5.1	High	56.2	10.5	High	.42
EDPART	PY68a-Drug ed/part reg. course	121	59	17.2	3.9	Mod	36.3	8.1	Mod	.62
EDDEMO	PY68c-Drug ed/assemblies	122	60	24.1	5.2	High	50.4	10.3	High	.46
EDCLUBS	PY68d-Drug ed/other activities	121	33	27.0	4.3	High	61.9	10.0	High	.43
Incidents										
SSSTEAL	PY26-Things stolen from locker/desk	226	22	14.9	3.1	Mod	43.8	9.2	Mod	.66
SSSTEYOU	PY28-Things stolen from child	40	45	30.7	9.1	High	62.0	18.8	High	.46
SSFORCE	PY29-Things taken by force	227	4	6.8	1.3	Low	81.1	26.0	High	.29
SSBULLY	PY34-Students bullied	226	39	22.8	3.2	High	47.9	6.2	High	.52
SSBULSEE	PY35-Child saw bullying	49	76	7.3	3.9	Low	30.2	20.8	Mod	.76
SSBULYOU	PY37-Child was bullied	49	33	27.4	8.5	High	56.6	19.4	High	.64
SSATTACK	PY39-Physical attacks took place	227	9	8.8	2.3	Low	51.1	19.4	High	.46
SSATTSEE	PY40-Child saw physical attack	11	76	44.2	18.8	High	116.4	159.2	High	.13
SSATTYOU	PY42-Child physically attacked	12	21	21.2	12.6	High	76.6	89.2	High	.40
SSINCDNT	PY45-Incident interfered/learning	72	22	25.0	7.0	High	55.7	15.1	High	.60

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: Gross difference rates less than 10 are considered Low, between 10 and 20 are Moderate, and greater than 20 are High. Indexes of inconsistency less than 20 are considered Low, between 20 and 45 are Moderate, and greater than 45 are High. The indexes of inconsistency for estimates outside the range of 20 and 80 percent are generally not comparable. All the estimate in the tables are weighted excepted the correlation coefficients. S.E. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 7.—Estimates of gross difference rates, indexes of inconsistency, and correlations from SS&D reinterviews of parents of 6th to 12th graders

Question*		Sample size	Estimated percent	Gross difference rate			Index of inconsistency			Correlation
				Estimate	S.E.	Level	Estimate	S.E.	Level	
General Environment										
SCPUBLIC	P10-Public/private school	277	93	0.0	0.0	Low	0.0	0.0	Low	1.00
SCASSIGN	P11-Assigned or chosen school	253	91	3.9	1.4	Low	23.5	8.8	Mod	.72
SCFIRST	P17-1st yr attended this school	277	26	1.8	0.8	Low	4.8	2.1	Low	.95
SCSTUD	P18-# students/child's school	253	39	15.6	2.3	Mod	32.7	5.0	Mod	.65
SECHALNG	PY21a-Child challenged/school	271	84	15.0	2.4	Mod	56.7	10.7	High	.55
SEPRIDIS	PY21e-Principal maintains disc.	272	89	9.1	2.2	Low	47.6	9.6	High	.55
SEMISBEH	P25-Misbehavior interfered/learn.	272	27	16.8	2.7	Mod	42.8	7.3	Mod	.52
SSGANGS	PY47-Any students in gangs	240	19	6.9	1.8	Low	22.6	5.4	Mod	.78
SSGUARDS	PY55a-School has guards	262	34	13.1	2.1	Mod	30.1	4.9	Mod	.72
SSMETAL	PY55b-School has metal detector	244	3	1.0	0.6	Low	17.2	11.3	Low	.77
SDPOLICY	PY56-Sch. has written disc. policy	258	97	1.7	0.8	Low	30.6	8.6	Mod	.61
SDDRUGS	PY59-Policy covers drugs	237	97	4.4	1.6	Low	80.6	23.2	High	.16
CCSCHL	P77-Child in school activities	276	71	11.9	2.3	Mod	29.2	6.0	Mod	.71
FCSTDS	P83c-Satisfied w/academic standards	275	88	10.3	2.8	Mod	48.3	9.6	High	.56
FCORDER	P83d-Satisfied with discipline	274	87	12.0	2.6	Mod	53.1	7.9	High	.60
FCMEETNG	P89a-Parents attd. gen. sch. meet.	276	77	4.1	1.6	Low	11.7	4.7	Low	.92
Drug/Alcohol Education										
EDDRUGS	P67-Child has drug education	239	69	14.6	2.1	Mod	34.8	4.6	Mod	.60
EDCOURSE	PY68b-Drug ed/special course	128	41	30.3	4.5	High	61.3	9.1	High	.35
EDPART	PY68a-Drug ed/part reg. course	123	72	15.6	3.8	Mod	41.4	7.8	Mod	.52
EDDEMO	PY68c-Drug ed/assemblies	127	66	33.5	4.9	High	75.0	9.7	High	.24
EDCLUBS	PY68d-Drug ed/other activities	124	39	22.2	4.1	High	46.5	8.0	Mod	.51
Drug and Alcohol Use										
TADRUNK	PY63-Students drunk at school	275	15	14.6	2.2	Mod	57.6	10.1	High	.49
TAHIGH	PY64-Students high at school	274	15	11.0	2.2	Mod	43.2	8.2	Mod	.59
TADEAL	PY66-Drug dealers at school	272	14	11.6	2.0	Mod	47.1	7.9	High	.52

Table 7.—Estimates of gross difference rates, indexes of inconsistency, and correlations from SS&D reinterviews of parents of 6th to 12th graders--Continued

Question*		Sample size	Estimated percent	Gross difference rate			Index of inconsistency			Correlation
				Estimate	S.E.	Level	Estimate	S.E.	Level	
Incidents										
SSSTEAL	PY26-Things stolen -locker/desk	276	51	19.3	2.6	Mod	38.7	5.2	Mod	.60
SSSTEYOU	PY28-Things stolen from child	105	34	13.9	3.5	Mod	29.5	7.4	Mod	.71
SSFORCE	PY29-Things taken by force	276	11	8.0	1.7	Low	40.5	7.2	Mod	.60
SSFORSEE	PY30-Saw things taken by force	21	65	33.6	12.1	High	74.8	32.0	High	.47
SSFORYOU	PY32-Child's things taken /force	20	16	18.9	9.9	Mod	46.8	19.6	Mod	.40
SSBULLY	PY34-Students bullied	269	40	23.6	3.0	High	49.1	6.2	Mod	.57
SSBULSEE	PY35-Child saw bullying	67	70	28.9	8.0	High	119.8	48.1	High	.32
SSBULYOU	PY37-Child was bullied	72	32	15.8	4.9	Mod	32.8	9.8	Mod	.65
SSATTACK	PY39-Physical attacks took place	275	30	19.6	3.1	Mod	46.4	6.4	High	.53
SSATTSEE	PY40-Child saw physical attack	41	71	20.2	7.6	High	56.0	15.6	High	.44
SSATTYOU	PY42-Child physically attacked	46	9	4.2	2.8	Low	21.2	18.7	Mod	.82
SSGANREL	PY50-Any incidents/gang activity	26	67	7.3	7.0	Low	30.0	31.6	Mod	.89
SSRACIAL	PY46-Any incident/racial motiv.	137	27	18.3	3.3	Mod	44.5	8.6	Mod	.54
SSINCDNT	PY45-Incidnt interfered/learning	153	24	20.5	3.6	High	52.1	9.6	High	.42
SSWEAOTH	PY53-Other student/bring weapon	276	30	13.1	1.9	Mod	31.6	4.2	Mod	.66

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: Gross difference rates less than 10 are considered Low, between 10 and 20 are Moderate, and greater than 20 are High. Indexes of inconsistency less than 20 are considered Low, between 20 and 45 are Moderate, and greater than 45 are High. The indexes of inconsistency for estimates outside the range of 20 and 80 percent are generally not comparable. All the estimate in the tables are weighted excepted the correlation coefficients. S.E. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

The response variance statistics for items with the 6th through 12th graders as respondents are shown in Table 8. As with the parents, the 6th through 12th graders had little problem with the general environment items. None of the eight items has a high gross difference rate, and the only three with high indexes of inconsistency have estimated percentages outside the range of 20 to 80 percent.

All four drug and alcohol education items have both high gross difference rates and indexes of inconsistency. This result is somewhat discouraging. It was hoped that students would be more consistent respondents than parents on these items since they were the recipients of the education. The difficulty in responding to these items may be associated with respondents interpreting what is meant by drug and alcohol education. In some schools, these topics are integrated into other courses and no special course is given on this topic. The respondents may not consistently interpret the question with respect to this type of education.

The items about drug and alcohol use have low or moderate gross difference rates and indexes of inconsistency. This contrasts to the moderate and high rates for the parents for these items. It should be noted that the percentage reported by the parents is generally less than 20 percent.

While the 6th to 12th graders are not more consistent than their parents in responding to the drug and alcohol education and use items, it should be noted that the estimated percentages for the respondents are not the same for the two types of respondents, indicating that the different types of respondents gave different answers. Because of the lack of consistency, further work on the drug and alcohol items is needed before they can be recommended for use in future studies.

The questions about incidents are also subject to relatively high estimates of response variance. For these respondents, items about several different weapons were answered by 10 respondents and are included in the table. These items were not included in Table 6 because fewer than 10 parents answered the questions. Eight of the 21 gross difference rates are high, 8 are moderate, and 5 are low. For the 14 estimated percentages in the range of 20 to 80 percent, the indexes of inconsistency are high for 9 items, moderate for 4 items, and low for 1 item. The incidents items with a high gross difference rate and a high index of inconsistency are about incidents of stealing, witnessing robbery, bullying, witnessing bullying, and physical assaults (SSSTEAL, SSFORSEE, SSBULLY, SSBULSEE, and SSATACK). Two of these items (SSFORSEE and SSBULSEE) also have high gross difference rates and indexes of inconsistency with the parents as the respondents. Two of the specific weapons items (SSMACE and SSSTICK) have both a high gross difference rate and a high index of inconsistency.

Response Bias in the SS&D Component

As mentioned earlier, the net difference rate computed based on the responses from the original and unreconciled reinterview is not an appropriate measure of response bias. This is because the two interviews were conducted under approximately the same conditions, so there is no reason to assume the unreconciled reinterview response is more accurate than the original response. However, the net difference rate computed based on the original and reconciled reinterview response may be a better measure of bias because the reconciliation process could result in a more accurate response.

Table 8.—Estimates of gross difference rates, indexes of inconsistency, and correlations from SS&D reinterviews of 6th to 12th graders

Question*		Sample size	Estimated percent	Gross difference rate			Index of inconsistency			Correlation
				Estimate	S.E.	Level	Estimate	S.E.	Level	
General Environment										
SSGANGS	PY47-Any students in gangs	456	33	11.9	2.0	Mod	26.9	4.6	Mod	.74
SSGUARDS	PY55a-School has guards	491	32	5.8	1.1	Low	13.3	2.3	Low	.86
SSMETAL	PY55b-School has metal detector	475	5	1.0	0.4	Low	10.1	3.9	Low	.82
SECHALNG	PY21a-Child challenged/school	491	84	12.4	1.8	Mod	45.2	6.2	High	.53
SEPRIDIS	PY21e-Principal maintains disc.	491	92	9.8	1.6	Low	63.8	10.5	High	.36
SSROUTE	Y44a-Took special route to school	493	4	4.0	0.9	Low	59.0	15.2	High	.44
SSPLACES	Y44b-Avoid places at school	493	22	12.0	1.6	Mod	35.0	3.9	Mod	.60
SSPARKNG	Y44c-Avoided place/schl. grounds	493	17	10.4	1.7	Mod	36.3	4.6	Mod	.54
Drug/Alcohol Education										
EDPART	PY68a-Drug ed/part reg. course	492	52	22.8	2.2	High	45.7	4.5	High	.51
EDCOURSE	PY68b-Drug ed/special course	491	34	27.9	2.8	High	62.4	6.1	High	.40
EDDEMO	PY68c-Drug ed/assemblies/demo	491	56	25.6	2.0	High	51.9	4.0	High	.45
EDCLUBS	PY68d-Drug ed/other activities	486	38	25.1	2.5	High	53.6	4.7	High	.45
Drug and Alcohol Use										
TADRUNK	PY63-Students drunk at school	492	33	12.1	1.7	Mod	27.5	4.4	Mod	.70
TAHIGH	PY64-Students high at school	489	25	12.6	1.7	Mod	33.4	4.2	Mod	.69
TADEAL	PY66-Drug dealers at school	492	21	10.0	1.6	Low	30.6	5.3	Mod	.66
Incidents										
SSSTEAL	PY26-Things stolen from locker/desk	487	63	21.5	3.0	High	46.1	5.9	High	.49
SSSTEYOU	PY28-Things stolen from child	261	24	11.8	2.1	Mod	30.4	5.7	Mod	.69
SSFORCE	PY29-Things taken by force	491	11	12.9	2.0	Mod	67.0	9.5	High	.43
SSFORSEE	PY30-Saw things taken by force	29	60	44.7	11.0	High	99.9	24.2	High	.24
SSFORYOU	PY32-Child's things taken /force	29	9	13.3	6.2	Mod	46.6	14.7	High	.37
SSBULLY	PY34-Students bullied	490	61	22.7	2.6	High	47.7	5.7	High	.58
SSBULSEE	PY35-Child saw bullying	222	71	23.5	3.7	High	68.7	10.2	High	.31
SSBULYOU	PY37-Child was bullied	222	85	17.1	3.7	Mod	58.4	7.2	High	.41
SSATTACK	PY39-Physical attacks took place	492	43	24.7	2.1	High	50.4	4.1	High	.47
SSATTSEE	PY40-Child saw physical attack	141	80	14.3	3.8	Mod	50.3	11.1	High	.46

Table 8.—Estimates of gross difference rates, indexes of inconsistency, and correlations from SS&D reinterviews of 6th to 12th graders--Continued

Question*		Sample size	Estimated percent	Gross difference rate			Index of inconsistency			Correlation
				Estimate	S.E.	Level	Estimate	S.E.	Level	
Incidents (continued)										
SSATTYOU	PY42-Child physically attacked	141	6	6.0	1.8	Low	40.5	16.5	Mod	.61
SSGANREL	PY50-Any incidents/gang activity	118	55	13.9	3.7	Mod	29.6	7.3	Mod	.64
SSRACIAL	PY46-Any incident/racial motivation	349	30	16.3	2.4	Mod	37.5	5.2	Mod	.60
SSWEAYOU	Y51-Brought weapons	493	3	1.9	0.7	Low	37.8	16.0	Mod	.66
SSJEWLRY	Y52e-Brought spiked jewelry	10	100	89.9	10.5	High	NA	NA	NA	.00
SSKNIFE	Y52b-Brought knife	10	57	0.0	0.0	Low	0.0	0.0	Low	1.00
SSMACE	Y52f-Brought mace	10	29	25.2	14.4	High	62.0	35.2	High	.53
SSRAZOR	Y52d-Brought razor	10	18	0.0	0.0	Low	0.0	0.0	Low	1.00
SSSTICK	Y52h-Brought stick	10	21	23.5	14.6	High	58.1	44.9	High	.52
SSOTHER	Y52i-Brought other weapon	10	11	0.0	0.0	Low	0.0	0.0	Low	1.00
SSWEAOTH	PY53-Others brought weapons	489	42	18.5	2.6	Mod	37.9	5.4	Mod	.61

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: Gross difference rates less than 10 are considered Low, between 10 and 20 are Moderate, and greater than 20 are High. Indexes of inconsistency less than 20 are considered Low, between 20 and 45 are Moderate, and greater than 45 are High. The indexes of inconsistency for estimates outside the range of 20 and 80 percent are generally not comparable.
All the estimate in the tables are weighted excepted the correlation coefficients. S.E. is standard error. If the estimate is 100 percent or 0 percent, then the index of inconsistency is undefined (NA).

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Tables of net difference rates were prepared for each item in the SS&D with 10 or more respondents in the reinterview. Since the reinterview and reconciled values were generally obtained in the same interview, the sample size for the unreconciled and reconciled responses are equal. The statistics were computed for each item and tabulated by the four groupings of items. The net difference rates were computed using the original and unreconciled reinterview responses and also using the original and reconciled reinterview responses.

Table 9 is a summary of the net difference rates based on the original and reconciled reinterview responses for the different types of respondents and groupings of items. The table gives the number of items in the grouping, the median net difference rate, and the number of items that had *t*-statistics greater than 2.0. The number of *t*-statistics greater than 2.0 is presented to approximate the number of items in which the net difference rate estimates the bias to be statistically significant. Because a large number of *t*-statistics are computed, about 5 percent of the items are expected to have *t*-statistics greater than 2.0 merely due to random fluctuation.

Table 9.—Summary of net difference rates based on original and reconciled reinterview responses from the SS&D, by groups of items

Type of respondent and item	Number of estimates	Median net difference rates	Number of items with *t* greater than 2.0
Parents of 3rd through 5th graders			
General environment items	14	0.1	2
Drug and alcohol education items	5	5.1	2
Incidents	10	6.3	3
Parents of 6th through 12th graders			
General environment items	16	0.0	1
Drug and alcohol education items	5	2.6	2
Drug and alcohol use items	4	4.5	0
Incidents	15	-2.4	1
6th through 12th graders			
General environment items	8	0.1	2
Drug and alcohol education items	4	1.9	0
Drug and alcohol use items	3	1.7	1
Incidents	21	0.8	3

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

The median net difference rates are generally close to zero, indicating that the response bias, as measured by the net difference rate, is not very large. The number of items with *t*-statistics greater than 2.0 is larger than expected by chance; 17 of the 105 items have *t*-statistics was greater than 2.0, while only about 5 would be expected to be this large by chance. There is no pattern in these statistics to suggest that a certain type of respondent or grouping of items is more subject to response bias. These results show that either that the items were not subject to large response bias or that the reconciliation process is not capturing the "true" values for the

respondents. Either of these situations would result in net difference rates such as those summarized in Table 9.

Although the net difference rates computed from the original and unreconciled reinterview responses should not be used to estimate response biases, they are useful in examining the validity of the gross difference rates as a measure of response variances. As discussed earlier, the gross difference rate is a valid measure of response variance if the expected value of the net difference rate based on the original and unreconciled responses is zero.

For each of the estimates included in the SS&D reinterview, *t*-statistics were computed for the net difference rates based on the original and unreconciled reinterview responses to examine this assumption. Of the 105 items, 15 have *t*-statistics greater than 2.0. Again, this is more than would be expected by chance alone, but it is not an obvious indication that the reinterviews were conducted under different conditions than the original. In terms of direction of bias, 9 of the net difference rates were negative and the other 6 were positive, indicating that the reinterview responses were neither systematically larger nor smaller than the original estimates. This lends support to the assumption that the same general conditions existed for the original and the reinterview and that gross difference rates should be appropriate measures of response variance.

The net difference rates can also be used to evaluate a hypothesis that arose during the testing of the instruments before the survey was begun. Adult participants in cognitive laboratory sessions in the pretest said that they spoke with their children after completing the interview and realized that some of their answers were incorrect. It was hypothesized that the same might happen in the full survey, and the parents' reinterview responses might be subject to greater differences than those of the 6th through 12th graders. The other observation from the cognitive laboratories was that the parents gave more positive responses after discussing the survey with their children. Thus, it was conjectured that parents might learn as a result of the interview and that would lead them to report a larger number of events in the reinterview.

The net difference rates computed from the original and unreconciled reinterview responses, however, do not support this hypothesis (tables 10 and 11). There are five *t*-statistics greater than 2.0 for both the parents of 6th through 12th graders and for the 6th through 12th graders themselves. For the incidents items, the net difference rates with *t*-statistics greater than 2.0 for both types of respondents were negative, suggesting that both types of respondents tended to report more incidents in the reinterview. Although this evidence is not conclusive, it does show that the interview may not have caused the parents to investigate the topics covered in the survey and to learn new information that changed their responses about those topics in the reinterview.

Estimates of the net difference rates for each item in the SS&D are given in Tables 10, 11, and 12. The tables include the estimated net difference rates, their standard errors, and the *t*-statistics for net differences computed using the original and the unreconciled reinterview responses and the original and the reconciled reinterview responses.

Response Variability and Bias in the SR Component

The response variance statistics, the gross difference rate and index of inconsistency, for the items from SR component of the NHES:93 are given in Table 13. The groupings used for presenting the statistics in this table are items about the child's development, general topics, reading and meals, and television viewing.

In general, the gross difference rates and indexes of inconsistency (where reliable) are in the low to moderate range for most of the items,

Table 10.—Estimates of net difference rates from SS&D reinterviews of parents of 6th to 12th graders

Question*		Sample size	Estimated percent	Original and unreconciled reinterview net difference rate			Original and reconciled reinterview net difference rate		
				Estimate	S.E.	*t*-statistic	Estimate	S.E.	*t*-statistic
General Environment									
SCPUBLIC	P10-Public/private school	277	93	0.0	0.0	0.0	0.0	0.0	0.0
SCASSIGN	P11-Assigned or chosen school	253	91	-0.4	1.3	-0.3	-0.5	1.0	-0.5
SCFIRST	P17-1st yr attended this school	277	26	-0.1	0.9	-0.1	0.2	0.8	0.3
SCSTUD	P18-# students/child's school	253	39	5.9	2.5	2.4	2.4	2.4	1.0
SECHALNG	PY21a-Child challenged/school	271	84	-4.2	2.8	-1.5	-3.4	2.6	-1.3
SEPRIDIS	PY21e-Principal maintains discipline	272	89	0.9	2.5	0.4	0.5	2.3	0.2
SEMISBEH	P25-Misbehavior interfered/learning	272	27	-1.5	2.7	-0.6	-1.5	1.8	-0.8
SSGANGS	PY47-Any students in gangs	240	19	-1.6	1.9	-0.8	-1.5	1.8	-0.8
SSGUARDS	PY55a-School has guards	262	34	0.2	2.7	0.1	-0.4	2.4	-0.2
SSMETAL	PY55b-School has metal detector	244	3	0.6	0.6	1.2	0.0	0.3	0.1
SDPOLICY	PY56-Sch. has written disc. policy	258	97	1.7	0.8	2.1	1.4	0.8	1.9
SDDRUGS	PY59-Policy covers drugs	237	97	0.6	1.6	0.4	2.3	1.0	2.2
CCSCHL	P77-Child in school activities	276	71	-1.8	2.5	-0.7	-0.1	2.0	-0.1
FCSTDS	P83c-Satisfied w/academic standards	275	88	1.1	3.1	0.4	0.2	2.9	0.1
FCORDER	P83d-Satisfied with discipline	274	87	0.8	3.1	0.3	1.6	2.8	0.6
FCMEETNG	P89a-Parents attd. gen. sch. meeting	276	77	-2.3	1.5	-1.5	-2.3	1.5	-1.5
Drug/Alcohol Education									
EDDRUGS	P67-Child has drug education	239	69	2.4	2.4	1.0	2.2	2.2	1.0
EDCOURSE	PY68b-Drug ed/special course	128	41	-0.2	5.1	-0.1	2.6	4.5	0.6
EDPART	PY68a-Drug ed/part of reg course	123	72	9.6	3.7	2.6	9.6	3.8	2.5
EDDEMO	PY68c-Drug ed/assemblies	127	66	10.1	6.0	1.7	14.2	4.5	3.2
EDCLUBS	PY68d-Drug ed/other activities	124	39	-5.2	4.5	-1.1	-1.4	3.1	-0.4
Drug and Alcohol Use									
TADRUNK	PY63-Students drunk at school	275	15	2.0	2.7	0.7	4.5	2.4	1.9
TAHIGH	PY64-Students high at school	274	15	-0.9	2.5	-0.4	1.7	2.3	0.7
TADEAL	PY66-Drug dealers at school	272	14	-0.9	2.1	-0.4	-0.3	1.8	-0.2

Table 10.—Estimates of net difference rates from SS&D reinterviews of parents of 6th to 12th graders--Continued

Question*		Sample size	Estimated percent	Original and unreconciled reinterview net difference rate			Original and reconciled reinterview net difference rate		
				Estimate	S.E.	*t*-statistic	Estimate	S.E.	*t*-statistic
Incidents									
SSSTEAL	PY26-Things stolen from locker/desk	276	51	-8.2	3.2	-2.6	-5.9	2.8	-2.1
SSSTEYOU	PY28-Things stolen from child	105	34	1.1	3.8	0.3	2.2	3.6	0.6
SSFORCE	PY29-Things taken by force	276	11	-2.5	1.8	-1.4	-0.5	1.4	-0.3
SSFORSEE	PY30-Saw things taken by force	21	65	-19.6	14.8	-1.3	-13.8	14.1	-1.0
SSFORYOU	PY32-Child's things taken /force	20	16	-10.6	10.5	-1.0	-7.2	10.2	-0.7
SSBULLY	PY34-Students bullied	269	40	-4.8	3.4	-1.4	-2.2	3.5	-0.6
SSBULSEE	PY35-Child saw bullying	67	70	-17.1	8.3	-2.1	-7.6	8.8	-0.9
SSBULYOU	PY37-Child was bullied	72	32	-2.4	5.2	-0.5	1.2	4.9	0.3
SSATTACK	PY39-Physical attacks took place	275	30	-7.5	3.7	-2.0	-4.2	3.3	-1.3
SSATTSEE	PY40-Child saw physical attack	41	71	6.1	8.3	0.7	2.3	4.2	0.5
SSATTYOU	PY42-Child physically attacked	46	9	4.2	2.8	1.5	4.2	2.8	1.5
SSGANREL	PY50-Any incidents/gang activity	26	67	-7.3	7.0	-1.0	-7.3	7.0	-1.0
SSRACIAL	PY46-Any incident/racial motivation	137	27	-0.2	4.9	0.0	1.2	4.6	0.3
SSINCDNT	PY45-Incidnt interfered/learning	153	24	-3.1	3.5	-0.9	1.2	2.8	0.4
SSWEAOTH	PY53-Other student/bring weapon	276	30	-2.8	2.5	-1.1	0.0	1.9	0.0

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: All estimates in the table are weighted. S.E. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

45

46

Table 11.—Estimates of net difference rates from SS&D reinterviews of parents of 3rd to 5th graders

Question*		Sample size	Estimated percent	Original and unreconciled reinterview net difference rate			Original and reconciled reinterview net difference rate		
				Estimate	S.E.	*t*-statistic	Estimate	S.E.	*t*-statistic
General Environment									
SCPUBLIC	P10-Public/private school	227	88	-0.4	0.4	-1.0	-0.4	0.4	-1.0
SCASSIGN	P11-Assigned or chosen school	188	88	1.0	1.8	0.6	1.0	1.8	0.6
SCFIRST	P17-1st yr attended this school	227	20	0.4	0.9	0.4	-0.5	0.5	-1.0
SCSTUD	P18-# students/child's school	204	71	-0.7	2.4	-0.3	2.8	1.9	1.4
SECHALNG	PY21a-Child challenged/school	226	87	4.1	2.8	1.5	2.4	1.3	1.9
SEPRIDIS	PY21e-Principal maintains disc.	227	94	-2.0	2.2	-0.9	-1.9	2.0	-1.0
SEMISBEH	P25-Misbehavior interfered/learning	226	24	-2.2	2.5	-0.9	-3.8	2.1	-1.8
SSGUARDS	PY55a-School has guards	218	10	-1.6	1.8	-0.9	-2.2	1.7	-1.3
SDPOLICY	PY56-Sch. has written disc. policy	214	92	4.4	1.9	2.3	43.3	24.2	1.8
SDDRUGS	PY59-Policy covers drugs	171	82	3.2	2.5	1.3	5.1	1.8	2.8
FCSTDS	P83c-Satisfied w/academic standards	227	96	-3.3	1.6	-2.1	-2.9	1.4	-2.1
FCORDER	P83d-Satisfied with discipline	227	91	0.6	2.3	0.2	-1.7	1.8	-1.0
FCMEETNG	P89a-Parents attd. gen. sch. meeting	226	91	0.0	0.5	0.0	0.0	0.5	0.0
Drug/Alcohol Education									
EDDRUGS	P67-Child has drug education	206	73	7.6	3.5	2.2	10.1	2.9	3.5
EDCOURSE	PY68b-Drug ed/special course	128	58	-1.9	4.8	-0.4	1.2	4.1	0.3
EDPART	PY68a-Drug ed/part of reg course	121	59	1.0	4.6	0.2	-0.6	4.5	-0.1
EDDEMO	PY68c-Drug ed/assemblies	122	60	6.8	5.8	1.2	12.7	5.4	2.4
EDCLUBS	PY68d-Drug ed/other activities	121	33	-0.2	5.9	0.0	2.3	4.7	0.5
Incidents									
SSSTEAL	PY26-Things stolen from locker/desk	226	22	3.5	3.2	1.1	5.4	2.7	2.0
SSSTEYOU	PY28-Things stolen from child	40	45	-7.7	11.0	-0.7	6.5	8.2	0.8
SSFORCE	PY29-Things taken by force	227	4	3.3	1.5	2.2	3.5	1.5	2.4
SSBULLY	PY34-Students bullied	226	39	-11.1	3.1	-3.5	-4.7	2.6	-1.8
SSBULSEE	PY35-Child saw bullying	49	76	-4.6	3.9	-1.2	1.3	1.3	1.1
SSBULYOU	PY37-Child was bullied	49	33	17.9	9.4	1.9	22.6	8.4	2.7
SSATTACK	PY39-Physical attacks took place	227	9	3.5	2.4	1.5	5.1	2.1	2.4
SSATTSEE	PY40-Child saw physical attack	11	76	-2.5	29.8	-0.1	20.8	21.5	1.0
SSATTYOU	PY42-Child physically attacked	12	21	6.1	13.6	0.5	0.0	0.0	0.0
SSINCDNT	PY45-Incident interfered/learning	72	22	-1.4	8.3	-0.2	2.2	5.0	0.4

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: All estimates in the table are weighted. S.E. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 12.—Estimates of net difference rates from SS&D reinterviews of 6th to 12th graders

Question*		Sample size	Estimated percent	Original and unreconciled reinterview net difference rate			Original and reconciled reinterview net difference rate		
				Estimate	S.E.	*t*-statistic	Estimate	S.E.	*t*-statistic
General Environment									
SSGANGS	PY47-Any students in gangs	456	33	-0.9	2.0	-0.4	0.6	1.8	0.4
SSGUARDS	PY55a-School has guards	491	32	-0.4	1.3	-0.3	0.6	1.0	0.6
SSMETAL	PY55b-School has metal detector	475	5	-0.3	0.4	-0.7	-0.3	0.4	-0.9
SECHALNG	PY21a-Child challenged/school	491	84	2.0	2.3	0.8	1.9	1.8	1.0
SEPRIDIS	PY21e-Principal maintains disc.	491	92	-0.7	1.4	-0.5	-0.3	1.3	-0.2
SSROUTE	Y44a-Took special route to school	493	4	0.2	1.0	0.2	0.4	0.9	0.5
SSPLACES	Y44b-Avoid places at school	493	22	-5.3	1.7	-3.2	-4.8	1.4	-3.4
SSPARKNG	Y44c-Avoided place/schl. grounds	493	17	-5.8	1.6	-3.6	-5.5	1.4	-3.9
Drug/Alcohol Education									
EDPART	PY68a-Drug ed/part of reg course	492	52	0.4	2.3	0.1	1.5	1.9	0.8
EDCOURSE	PY68b-Drug ed/special course	491	34	0.1	2.8	0.1	2.2	2.2	1.0
EDDEMO	PY68c-Drug ed/assemblies/demo	491	56	-1.0	2.6	-0.4	2.3	2.3	1.0
EDCLUBS	PY68d-Drug ed/other activities	486	38	-1.1	3.8	-0.3	-1.4	3.5	-0.4
Drug and Alcohol Use									
TADRUNK	PY63-Students drunk at school	492	33	1.6	1.7	0.9	3.3	1.6	2.1
TAHIGH	PY64-Students high at school	489	25	0.5	1.7	0.3	1.7	1.6	1.1
TADEAL	PY66-Drug dealers at school	492	21	-1.0	1.5	-0.6	0.6	1.3	0.5
Incidents									
SSSTEAL	PY26-Things stolen from locker/desk	487	63	-0.2	3.6	-0.1	1.4	3.5	0.4
SSSTEYOU	PY28-Things stolen from child	261	24	-3.5	2.1	-1.1	-1.2	1.9	-0.6
SSFORCE	PY29-Things taken by force	491	11	1.1	2.4	0.5	1.9	1.7	1.1
SSFORSEE	PY30-Saw things taken by force	29	60	-1.9	16.2	-0.1	13.8	10.3	1.3
SSFORYOU	PY32-Child's things taken /force	29	9	-13.3	6.2	-2.2	-13.3	6.2	-2.2
SSBULLY	PY34-Students bullied	490	61	-12.4	2.8	-4.3	-6.1	2.0	-3.1
SSBULSEE	PY35-Child saw bullying	222	71	-1.6	3.5	-0.5	7.2	2.5	2.9
SSBULYOU	PY37-Child was bullied	222	85	-6.9	3.3	-2.0	-1.9	2.6	-0.7
SSATTACK	PY39-Physical attacks took place	492	43	-4.5	2.2	-2.0	0.8	1.8	0.5
SSATTSEE	PY40-Child saw physical attack	141	80	5.9	3.7	1.6	6.6	3.5	1.9
SSATTYOU	PY42-Child physically attacked	141	6	0.5	2.0	0.2	2.4	1.9	1.3

Table 12.—Estimates of net difference rates from SS&D reinterviews of 6th to 12th graders--Continued

Question*		Sample size	Estimated percent	Original and unreconciled reinterview net difference rate			Original and reconciled reinterview net difference rate		
				Estimate	S.E.	*t*-statistic	Estimate	S.E.	*t*-statistic
Incidents (continued)									
SSGANREL	PY50-Any incidents/gang activity	118	55	1.0	3.8	0.3	1.9	3.4	0.6
SSRACIAL	PY46-Any incident/racial motivation	349	30	-3.8	2.3	-1.6	-0.8	1.8	-0.5
SSWEAYOU	Y51-Brought weapons	493	3	0.7	0.7	1.1	1.2	0.6	1.8
SSJEWLRY	Y52e-Brought spiked jewelry	10	100	-1.1	10.5	-0.1	-1.1	10.5	-0.1
SSKNIFE	Y52b-Brought knife	10	57	0.0	0.0	0.0	0.0	0.0	0.0
SSMACE	Y52f-Brought mace	10	29	-5.6	16.7	-0.3	-5.6	16.7	-0.3
SSRAZOR	Y52d-Brought razor	10	18	0.0	0.0	0.0	0.0	0.0	0.0
SSSTICK	Y52h-Brought stick	10	21	7.3	14.3	0.5	15.4	11.7	1.3
SSOTHER	Y52i-Brought other weapons	10	11	0.0	0.0	0.0	0.0	0.0	0.0
SSWEAOTH	PY53-Others brought weapons	489	42	-1.2	2.0	-0.6	2.3	1.9	1.2

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: All estimates in the table are weighted. S.E. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

51

52

indicating the estimates from the survey were reported consistently in the interview and reinterview. All of the gross difference rates for the 18 development items are either low or moderate, and the one item with a high index of inconsistency has an estimated percentage outside the range of 20 to 80 percent. Only 2 of the 32 general topic items have both a high gross difference rate and index of inconsistency (SATEACHR and HNHEALTH). The first of these questioned whether the child said he/she liked the teacher and the other asked about the general health of the child.

The items about reading and meals differed from most other items in the reinterview in that the respondent was asked about activities in the past week. Since the child's activities might have been different in the week preceding the original and the reinterview, it was expected that the consistency of reporting these items might be inflated due to this factor. The results in Table 13 show that this may have occurred; the gross difference rates and indexes of inconsistency for many of these items are higher than for the other items in the table. Since the gross difference rate and index of inconsistency include a component due to the difference in the reference week, the statistics do not measure response variance well for these items. This was the reason that most items asking about events in a specific week were not selected for the reinterview.

The temporal nature of the questions may have also affected the responses to the questions that asked if teachers had commented about the child since the beginning of the school year. These are the 13 items in the general topics grouping that have variable names that begin with the letters "TE." These items are the only reinterview items with specific reference periods other than the reading and meals items. None of the 13 items had a high gross difference rate and about half (7) were moderate. The indexes of inconsistency were high for several of the items, but the estimated percentages for the items are outside the range of 20 to 80 percent. The effect of the different reference period for these items is not as serious as for the items about reading and meals, probably for two reasons. First, the amount of change that could be expected in the teacher comments items is much less than in the reading and meals items. Second, the reference period for the teacher comments items is much longer (from the beginning of the school year) than for the reading and meals items (last week).

In the NHES:91 reinterview the Head Start items were identified as being reported inconsistently, with moderate or high gross difference rates and indexes of inconsistency for many of the items (Brick and West 1992). As a result, the items were revised for the NHES:93 and the new items asked more directly about Head Start participation. The items in the NHES:93 (HEADSTRT and HEADEVR) have low gross difference rates. These results show that the reporting was more consistent using the NHES:93 format than the NHES:91.

The net difference rates for items included in the SR reinterview are given in Table 14. Only 17 of the items were reconciled, so the number of these items for analysis of response bias is limited. Six of the 17 net differences using the reconciled responses have *t*-statistics greater than 2.0 in absolute value, but 2 of the 6 are for items with different reference periods (READTO and READTON) so that little can be generalized about the meaning of the results. The net difference rates are all generally small with no estimates of bias as large as 4 percent.

Several items in the SR interview appear in each NHES component concerning young children. These include items related to family members reading to children and items associated with children's participation in center-based early childhood programs, including Head Start, day care centers, nursery schools, preschools, and prekindergartens. Items associated with reading in the previous week (READTO, READTON,

Table 13.—Estimates of gross difference rates, indexes of inconsistency, and correlations from SR reinterviews

Question*		Sample size	Estimated percent	Gross difference ratio			Index of inconsistency			Correlation
				Estimate	S.E.	Size	Estimate	S.E.	Size	
Development										
DPCOLOR	R14-Identifies color	364	79	6.8	1.5	Low	20.8	4.8	Mod	.79
DPLETTER	R15-Recognizes letters	363	45	11.4	1.9	Mod	22.9	3.8	Mod	.77
DPCOUNT	R16-How high counts	364	48	12.7	2.1	Mod	25.5	4.1	Mod	.74
DPNAME	R17-Writes first name	363	49	11.3	2.0	Mod	22.6	3.9	Mod	.77
DPBUTTON	R18-Buttons clothes	360	87	6.9	1.4	Low	30.1	6.4	Mod	.69
DPPENCIL	R19-Holds pencil properly	361	90	6.6	1.6	Low	35.9	8.1	Mod	.65
DPWRITE	R20-Writes and draws	362	62	13.6	1.9	Mod	28.8	3.7	Mod	.71
DPFALL	R21-Trips/falls easily	364	10	6.7	1.8	Low	36.2	9.5	Mod	.64
DPSITTER	R22-Stays w/sitter easily	351	89	5.4	1.4	Low	27.9	7.4	Mod	.65
DPTEMPER	R23-Has tantrums often	364	23	15.1	2.1	Mod	43.2	5.7	Mod	.53
DPAFRAID	R24-Afraid of strangers	361	46	18.6	2.7	Mod	37.4	5.5	Mod	.65
DPFIDGET	R25-Fidgets a lot	363	27	15.6	2.2	Mod	40.0	4.5	Mod	.58
DPATTN	R26--Short attention span	360	27	11.5	1.8	Mod	29.5	4.1	Mod	.65
DPSPEAK	R27-Stranger can understand	363	93	5.4	1.2	Low	41.2	10.4	Mod	.54
DPSPELAT	R28-Began speaking late	361	14	5.0	1.2	Low	21.5	5.2	Mod	.75
DPSTUTER	R29-Stutter/stammers	364	8	5.6	1.6	Low	37.4	9.4	Mod	.63
DPTV	R30-Turns TV volume high	364	8	5.6	0.8	Low	37.9	6.3	Mod	.63
DPBEND	R31-Bends/look at picture	364	4	8.3	1.8	Low	56.0	10.9	High	.42
General Topics										
HEADSTRT	R32-Enrolled in Head Start	363	9	4.9	1.8	Low	31.3	11.0	Mod	.73
HEADEVR	R33-Ever attend Head Start	843	10	3.6	0.6	Low	19.7	3.2	Low	.75
PREKIND	R36-Attend nursery/preschool	363	48	3.8	0.9	Low	7.7	1.8	Low	.90
PREKEVR	R37-Ever attd. nursery/preschool	679	51	8.0	1.4	Low	16.1	2.7	Low	.86
PREKANY	R40-PreK had educ program	612	92	7.6	1.2	Low	52.6	9.5	High	.48
SACOMPLA	R51a-Complain abt. school	516	8	4.9	1.3	Low	38.0	8.4	Mod	.62
SALEAVE	R51b-Reluctant/go school	515	18	11.6	1.6	Mod	40.3	4.6	Mod	.58
SASICK	R51c-Pretend to be sick	517	11	10.7	1.4	Mod	53.3	5.8	High	.41
SAGOOD	R51d-Said good thing/school	517	97	4.2	1.0	Low	75.4	16.9	High	.30
SATEACHR	R51e-Liked teacher	514	63	23.7	2.1	High	50.8	4.3	High	.48
SASCHOOL	R51f-Looked forward/school	514	83	13.2	1.6	Mod	42.8	5.4	Mod	.40
TEWELL	R52a-Doing well in school	517	91	9.5	1.7	Low	58.7	11.2	High	.51
TEABIL	R52b-Not up to capability	514	19	14.6	2.0	Mod	47.1	5.8	High	.46
TEATTENT	R52c-Doesn't concentrate	516	22	14.1	1.8	Mod	40.7	4.7	Mod	.57
TEDISRUP	R52d-Acts up in school	517	18	13.9	1.7	Mod	46.3	4.6	High	.54
TESAD	R52e-Often sad/unhappy	517	7	7.7	1.5	Low	61.3	10.6	High	.33
TEFIDGET	R52f-Restless/fidgets	517	13	6.9	1.4	Low	29.7	6.3	Mod	.70
TESHARE	R52g-Has trouble sharing	517	9	8.7	1.4	Low	52.3	9.8	High	.44
TEGROUP	R52h-Gets along well	516	90	13.2	1.8	Mod	74.2	7.0	High	.24

Table 13.—Estimates of gross difference rates, indexes of inconsistency, and correlations from SR reinterviews--Continued

Question*		Sample size	Estimated percent	Gross difference ratio			Index of inconsistency			Correlation
				Estimate	S.E.	Size	Estimate	S.E.	Size	
General Topics (continued)										
TEENTHUS	R52i-Enthuiastic	512	85	13.4	1.5	Mod	53.2	6.1	High	.41
TENONEW	R52j-Lacks confidence	516	12	12.3	1.7	Mod	60.2	8.8	High	.40
TECLEAR	R52k-Hard to understand	517	5	2.8	0.9	Low	32.3	9.6	Mod	.72
TESLEEPY	R52l-Sleepy in class	517	3	3.1	0.7	Low	61.8	17.9	High	.24
TEEXPRES	R52m-Speaks out in class	501	66	19.8	2.2	Mod	43.7	4.6	Mod	.54
PREADING	R79a-Received help/read	353	16	6.7	1.5	Low	24.9	6.2	Mod	.77
PMATH	R79b-Received help/math	352	5	2.6	0.8	Low	32.0	9.7	Mod	.61
PADJUST	P79c-Received help/adjust	354	3	2.2	0.7	Low	38.4	9.6	Mod	.30
PSPEECH	P79d-Received help/speech	355	9	4.3	1.5	Low	26.8	7.7	Mod	.86
PENGLISH	P79e-Received help/ESL	354	2	2.5	0.8	Low	56.6	20.1	High	.40
HNFREE	R118-Free meal at school	713	26	3.0	0.8	Low	7.7	2.2	Low	.93
HNHEALTH	R106-Child's general health	881	62	23.1	1.7	High	49.1	3.4	High	.54
HNDOCWHN	R110-Last routine Doctor visit	882	85	11.1	1.3	Mod	43.5	4.8	Mod	.58
Events in past week										
READTO	R96-Read/child last week	435	88	9.7	1.9	Low	45.5	7.0	High	.46
READTON	R97-# times read to child	370	22	17.0	2.2	Mod	51.3	6.5	High	.51
READDAY	R98-Read every day	263	75	20.3	3.0	High	63.5	12.1	High	.46
HNBREAK	R113-# days ate breakfast	362	90	7.6	1.1	Low	39.0	5.3	Mod	.57
HNDINNER	R115-# days/dinner together	362	53	37.9	2.6	High	64.6	3.6	High	.62
Television										
TVBFOR8H	R92a-Min./TV before 8am	880	+	26.9	1.7	High	49.0	3.1	High	.56
TV8TO3H	R92b-Hrs/TV 8am-3pm	876	+	29.0	1.8	High	48.3	2.7	High	.78
TV3DINH	R92c-Hrs/TV 3pm-dinner	875	+	53.9	2.0	High	69.9	2.8	High	.56
TVAFDINH	R92d-Hrs/TV after dinner	877	+	52.0	2.2	High	66.7	2.8	High	.53
TVSATH	R92e-Hrs/TV Saturday	878	+	51.1	2.1	High	64.5	2.7	High	.68
TVSUNH	R92f-Hrs/TV Sunday	878	+	48.9	1.9	High	62.8	2.5	High	.68

*The specific questions can be found in the questionnaires in Appendix A.

+The television items are continuous variables so no value is reported for the estimated percent.

NOTES: Gross difference rates less than 10 are considered Low, between 10 and 20 are Moderate, and greater than 20 are High. Indexes of inconsistency less than 20 are considered Low, between 20 and 45 are Moderate, and greater than 45 are High. The indexes of inconsistency for estimates outside the range of 20 and 80 percent are generally not comparable. All estimates in the table are weighted except the correlation coefficients. S.E. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

READDAY) have gross difference rates ranging from low to high, but have uniformly high indexes of inconsistency. The item concerning reading to the child every day in the previous week is high on both measures. Items on center-based programs, HEADSTRT and PREKIND, have low gross difference rates; HEADSTRT has a moderate index of inconsistency, whereas that for PREKIND is low.

As discussed above for the SS&D, the net difference rates computed from the original interview and unreconciled reinterview responses in the SR can be used to assess the assumption that the two interviews were conducted under the same general conditions. Of the 55 items in the reinterview, the *t*-statistics for 15 items are greater than 2.0. This is nearly one-quarter of the items and is greater than the 5 percent that would be expected by chance alone. There does not appear to be a pattern to the estimated biases; 6 are positive and 9 are negative. These results are not very supportive of the assumption that conditions for the original and reinterview were the same; rather, they raise concerns about how valid the gross difference rates are as measures of response variance.

Table 14.—Estimates of net difference rates from SR reinterviews

Question*		Sample size	Estimated percent	Original and unreconciled reinterview net difference rate			Original and reconciled reinterview net difference rate		
				Estimate	S.E.	*t*-statistic	Estimate	S.E.	*t*-statistic
Development									
DPCOLOR	R14-Identifies color	364	79	-2.6	1.6	-1.6			
DPLETTER	R15-Recognizes letters	363	45	1.0	2.0	0.5			
DPCOUNT	R16-How high counts	364	48	-4.8	2.2	-2.2			
DPNAME	R17-Writes first name	363	49	2.9	2.1	1.4			
DPBUTTON	R18-Buttons clothes	360	87	0.2	1.5	0.1			
DPPENCIL	R19-Holds pencil properly	361	90	0.6	1.4	0.4			
DPWRITE	R20-Writes and draws	362	62	8.6	2.0	4.2			
DPFALL	R21-Trips/falls easily	364	10	-1.7	1.9	-0.9			
DPSITTER	R22-Stays w/sitter easily	351	89	1.0	1.5	0.6			
DPTEMPER	R23-Has tantrums often	364	23	-5.5	2.0	-2.8			
DPAFRAID	R24-Afraid of strangers	361	46	-2.6	2.7	-0.9			
DPFIDGET	R25-Fidgets a lot	363	27	-8.0	2.5	-3.2			
DPATTN	R26--Short attention span	360	27	-4.3	2.0	-2.1			
DPSPEAK	R27-Stanger can understand	363	93	0.1	1.3	0.1			
DPSPELAT	R28-Began speaking late	361	14	-1.4	1.3	-1.0			
DPSTUTER	R29-Stutter/stammers	364	8	-0.7	1.3	-0.5			
DPTV	R30-Turns TV volume high	364	8	-1.6	1.0	-1.6			
DPBEND	R31-Bends/look at picture	364	4	-1.7	1.8	-1.0			
General Topics									
HEADSTRT	R32-Enrolled in Head Start	363	9	1.0	1.8	0.5			
HEADEVR	R33-Ever attend Head Start	843	10	-0.8	0.8	-0.9	-1.7	0.5	-3.3
PREKIND	R36-Attend nursery/preschool	363	48	2.0	1.1	1.8	2.3	0.9	2.7
PREKEVR	R37-Ever attd. nursery/preschool	679	51	3.8	1.3	2.8	3.5	1.3	2.7
PREKANY	R40-PreK had educ program	612	92	-1.0	1.2	-0.8	1.4	0.9	1.5
SACOMPLA	R51a-Complain abt. school	516	8	-1.5	1.1	-1.3			
SALEAVE	R51b-Reluctant/go school	515	18	-4.7	1.5	-3.1			
SASICK	R51c-Pretend to be sick	517	11	-4.5	1.6	-2.8			
SAGOOD	R51d-Said good thing/school	517	97	-0.3	0.9	-0.4			
SATEACHR	R51e-Liked teacher	514	63	1.4	2.1	0.7			
SASCHOOL	R51f-Looked forward/school	514	83	4.4	1.7	2.6			
TEWELL	R52a-Doing well in school	517	91	-1.8	1.4	-1.2			
TEABIL	R52b-Not up to capability	514	19	-3.6	2.0	-1.8			

Table 14.—Estimates of net difference rates from SR reinterviews--Continued

Question		Sample size	Estimated percent	Original and unreconciled reinterview net difference rate			Original and reconciled reinterview net difference rate		
				Estimate	S.E.	*t*-statistic	Estimate	S.E.	*t*-statistic
General Topic (continued)									
TEATTENT	R52c-Doesn't concentrate	516	22	-3.4	2.0	-1.7			
TEDISRUP	R52d-Acts up in school	517	18	-4.8	1.9	-2.5			
TESAD	R52e-Often sad/unhappy	517	7	-1.4	1.4	-1.0			
TEFIDGET	R52f-Restless/fidgets	517	13	0.7	1.3	0.5			
TESHARE	R52g-Has trouble sharing	517	9	-1.7	1.6	-1.0			
TEGROUP	R52h-Gets along well	516	90	2.2	1.8	1.2			
TEENTHUS	R52i-Enthusiastic	512	85	3.8	1.5	2.6			
TENONEW	R52j-Lacks confidence	516	12	0.1	1.6	0.1			
TECLEAR	R52k-Hard to understand	517	5	-0.1	0.9	-0.1			
TESLEEPY	R52l-Sleepy in class	517	3	-0.4	0.7	-0.6			
TEEXPRES	R52m-Speaks out in class	501	66	5.9	2.0	3.0			
PREADING	R79a-Received help/read	353	16	1.5	1.7	0.9	2.2	1.5	1.4
PMATH	R79b-Received help/math	352	5	-1.1	0.9	-1.3	-0.3	0.7	-0.4
PADJUST	P79c-Received help/adjust	354	3	-1.8	0.7	-2.3	-0.6	0.3	-1.9
PSPEECH	P79d-Received help/speech	355	9	-0.3	1.6	-0.2	-1.3	1.1	-1.2
PENGLISH	P79e-Received help/ESL	354	2	-0.3	0.9	-0.3	-1.4	0.6	-2.4
HNFREE	R118-Free meal at school	713	26	0.1	0.9	0.2	0.9	0.6	1.3
HNHEALTH	R106-Child's general health	881	62	1.8	2.1	0.8	1.8	1.7	1.0
HNDOCWHN	R110-Last routine Doctor visit	882	85	-0.2	1.1	-0.2	0.1	1.2	0.1
Reading and Meals									
READTO	R96-Read/child last week								
READTON	R97-# times read to child	435	88	3.9	1.8	2.1	3.9	1.8	2.2
READDAY	R98-Read every day	370	22	-1.5	1.8	-0.9	-3.6	1.8	-2.0
HNBREAK	R113-# days ate breakfast	263	75	-8.6	3.2	-2.7	-2.5	2.7	-1.0
HNDINNER	R115-# days/dinner together	362	90	0.9	1.1	0.8	1.5	0.9	1.6

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: All estimates in the table are weighted. S.E. is standard error. Variables that were not reconciled are blank.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Composite Variables

The television viewing grouping is the only set of items from the SR not discussed above. This analysis was delayed because none of the six items is of much substantive interest alone. Rather, the responses to the items can be combined to form a composite variable, the number of hours spent watching television during a week, which is of great interest. A second composite variable, a developmental score based on the responses to the developmental items, is also examined below.

In order to evaluate the reliability of composite variables or scale scores using reinterview data, all of the items included in the new variable had to be asked in the reinterview. When the reinterview for the NHES:93 was being planned, all of the items associated with the television viewing composite variable and the developmental composite variable were included to make this type of analysis possible.

Two of the purposes of developing scales or composite variables are to obtain more reliable measures than can be obtained by asking one question and to describe a phenomenon with more than one dimension using a single statistic (McIver and Carmines 1981). The possibility of improving the reliability was the prime motivation for having multiple television items that could be combined into one variable. Previous experience with a single item on television viewing had low reliability, and it was hoped the composite would be more reliable. For the SR developmental scale, items tapping different dimensions related to a child's development were included in the interview with the hope that a scale based on these items would provide a more complete and reliable description of the child's development than would be obtained by examining the items one at a time.

The items about television viewing asked parents how many hours the child watched television during particular periods of the day and week. The indexes of inconsistency for the six television viewing items (TVBFOR8H, TV8TO3H, TV3DINH, TVAFDINH, TVSATH, and TVSUNH) are given in Table 13. The indexes of inconsistency are high for all six items. Based on the responses to these six items, the total number of hours per week spent watching television was computed, and the index of inconsistency was computed for this composite variable. The index of inconsistency for the composite is 22 percent, which is moderate. The index for the weekly composite is lower than all of the individual indexes, suggesting the desired result of constructing a more reliable composite variable was achieved.

The developmental scale score was computed from the 18 items in the development grouping that were asked of parents of preschool children in the SR. The scale was formed by adding together all the items the child was able to perform according to the parent's responses. Thus, if a parent said the child was able to perform half of the 18 tasks, then the scale score for the child was 9. The indexes of inconsistency for all of the 18 separate items are shown in Table 13. For the 8 of these items in the range between 20 and 80 percent, the indexes for the developmental items varied from 23 percent to 43 percent, with half of the items having an index above 29 percent. The index of inconsistency for the developmental scale score was only 13 percent, which is less than the lowest of the separate items. The response variance for this scale is low. Again, the finding shows that the composite scale is more reliable than the separate items.

Reconciliation Issues

In the discussions above, some concerns have been raised about the validity of the estimates as measures of response variance and bias. These methodological issues and assumptions are addressed in this section. If the original and reinterview responses were not identical, the

respondent was asked which of the two different responses was correct during reconciliation. Many, but not all, items in the reinterview were reconciled. If the original and reinterview responses were independent and identically distributed and the reconciled reinterview response was the "true" value, then the reconciled responses should agree with the original responses about half the time and with the unreconciled reinterview responses about half the time. As discussed earlier, the assumption of independent, identically distributed responses is needed to prove that the gross difference rate and the index of inconsistency are valid measures of response variance. As will be shown, the results of the reconciliation also have some implications about the validity of the net difference rate as a measure of response bias.

To evaluate the validity of the assumption that the responses had the same distribution, the data from the NHES:93 reinterview were classified into one of four possible outcomes:

- Original and reinterview responses concurred (no reconciliation);
- Reconciliation response agreed with original response;
- Reconciliation response agreed with reinterview response; and
- All three answers were different.

Hubbard and Brenner (1996) report that many respondents do not verbalize affective reactions to the request to reconcile inconsistent responses. In addition, they observed that many respondents devote little time to this cognitive task "immediately resolving the discrepancy" (p.13).

The fourth possibility was very unusual, given the wording of the reconciliation. In fact, it only occurred in a few cases when the respondent realized that neither of the two answers given was correct and that the questions had more than two possible response categories.

The estimated percent agreement and the agreement ratio for each item was computed for the three types of SS&D respondents and the SR respondent and are given in Tables 15, 16, 17, and 18. The agreement ratio is used to measure whether the responses to the reconciliation were more likely to agree with the original or unreconciled reinterview response. If the agreement ratio is greater than 1.0, then more of the reconciled responses agreed with the unreconciled reinterview responses than with the original responses.

In general, the reconciled responses were more likely to agree with the responses given in the reinterview rather than in the original interview. For the parents of 6th through 12th graders, 35 of the 38 items had agreement ratios greater than 1 (one item did not require reconciliation); for parents of 3rd through 5th graders, 17 of 28 items had agreement ratios greater than 1 (two items did not require reconciliation); for 6th through 12th graders, 27 of the 30 items had ratios of greater than 1 (the 6 items with 10 observations were dropped for this analysis); and for the SR parent respondents, 16 of 18 of the reconciled items had ratios of greater than 1.

These findings are consistent with those from the NHES:91 reinterview, where the reconciled responses agreed with the unreconciled reinterview responses three times more often than with the original response (Brick and West 1992). In that reinterview, the respondents were told which answer they had just given in the reinterview and which was the original response. Since giving the respondents this information might influence their choice, the procedure was changed for the NHES:93 reinterview and respondents were not told which response was from the original interview and which was from the reinterview. Despite the revisions, the respondents were more likely to state that the reinterview response was the correct one.

Table 15.—Estimates of agreement between original, unreconciled reinterview, and reconciled reinterview for SS&D, parents of 6th to 12th graders

Question*		Sample size	Percent agreement of responses			Agreement ratio
			Original and unreconciled reinterview	Unreconciled and reconciled	Original and reconciled	
General Environment						
SCPUBLIC	P10-Public/private school	277	100.0	0.0	0.0	NA
SCASSIGN	P11-Assigned or chosen school	253	97.2	2.2	0.6	3.4
SCFIRST	P17-1st yr attended this school	277	98.2	1.5	0.3	5.1
SCSTUD	P18-# students/child's school	253	84.7	11.0	4.3	2.6
SECHALNG	PY21a-Child challenged/school	271	85.0	11.5	3.6	3.2
SEPRIDIS	PY21e-Principal maintains disc.	272	91.2	5.7	3.1	1.8
SEMISBEH	P25-Misbehavior interfered/learning	272	83.2	9.8	7.0	1.4
SSGANGS	PY47-Any students in gangs	240	93.5	5.8	0.7	8.7
SSGUARDS	PY55a-School has guards	262	86.9	10.3	2.8	3.7
SSMETAL	PY55b-School has metal detector	244	99.0	0.4	0.6	0.6
SDPOLICY	PY56-Sch. has written disc. policy	258	98.6	1.4	0.0	NA
SDDRUGS	PY59-Policy covers drugs	237	95.7	2.3	2.0	1.2
CCSCHL	P77-Child in school activities	276	88.1	8.0	3.9	2.1
FCSTDS	P83c-Satisfied w/academic stand	275	90.4	8.1	1.6	5.0
FCORDER	P83d-Satisfied with discipline	274	88.0	9.0	3.0	3.0
FCMEETNG	P89a-Parents attd. gen. school meeting	276	95.9	4.2	0.0	NA
Drug/Alcohol Education						
EDDRUGS	P67-Child has drug education	239	85.9	12.9	1.2	11.0
EDCOURSE	PY68b-Drug ed/special course	128	70.2	22.1	7.7	2.9
EDPART	PY68a-Drug ed/part of reg course	123	84.7	14.3	1.0	13.8
EDDEMO	PY68c-Drug ed/assemblies	127	66.8	23.4	9.8	2.4
EDCLUBS	PY68d-Drug ed/other activities	124	78.6	10.0	11.4	0.9
Drug and Alcohol Use						
TADRUNK	PY63-Students drunk at school	275	85.7	11.1	3.3	3.4
TAHIGH	PY64-Students high at school	274	89.0	8.3	2.7	3.1
TADEAL	PY66-Drug dealers at school	272	88.6	9.8	1.7	5.9

Table 15.—Estimates of agreement between original, unreconciled reinterview, and reconciled reinterview for SS&D, parents of 6th to 12th graders--Continued

Question*		Sample size	Percent agreement of responses			Agreement ratio
			Original and unreconciled reinterview	Unreconciled and reconciled	Original and reconciled	
Incidents						
SSSTEAL	PY26-Things stolen from locker/desk	276	80.9	14.0	5.1	2.7
SSSTEYOU	PY28-Things stolen from child	105	86.1	12.8	1.1	11.8
SSFORCE	PY29-Things taken by force	276	92.0	4.9	3.1	1.6
SSFORSEE	PY30-Saw things taken by force	21	66.4	27.8	5.7	4.9
SSFORYOU	PY32-Child's things taken /force	20	81.1	15.5	3.4	4.5
SSBULLY	PY34-Students bullied	269	76.4	19.2	4.5	4.3
SSBULSEE	PY35-Child saw bullying	67	73.2	19.7	7.1	2.8
SSBULYOU	PY37-Child was bullied	72	84.2	11.2	4.6	2.4
SSATTACK	PY39-Physical attacks took place	275	80.9	15.1	4.0	3.8
SSATTSEE	PY40-Child saw physical attack	41	84.5	7.3	8.2	0.9
SSATTYOU	PY42-Child physically attacked	46	95.8	4.2	0.0	NA
SSGANREL	PY50-Any incidents/gang activity	26	92.7	7.3	0.0	NA
SSRACIAL	PY46-Any incident/racial motivation	137	81.7	16.9	1.4	12.1
SSINCDNT	PY45-Incident interfered/learning	153	79.5	11.7	8.8	1.3
SSWEAOTH	PY53-Other student/bring weapons	276	87.0	8.9	4.1	2.2

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: All estimates in the table are weighted. If the percent agreement for the original and reconciled reinterview is zero, then the agreement ratio is undefined (NA).

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 16.—Estimates of agreement between original, unreconciled reinterview, and reconciled reinterview for SS&D, parents of 3rd to 5th graders

Question*		Sample size	Percent agreement of responses			Agreement ratio
			Original and unreconciled reinterview	Reconciled and reconciled	Original and reconciled	
General Environment						
SCPUBLIC	P10-Public/private school	227	99.6	0.4	0.0	NA
SCASSIGN	P11-Assigned or chosen school	188	96.3	3.7	0.0	NA
SCFIRST	P17-1st yr attended this school	227	98.4	0.5	1.1	0.5
SCSTUD	P18-# students/child's school	204	87.8	6.6	5.6	1.2
SECHALNG	PY21a-Child challenged/school	226	90.2	4.1	5.8	0.7
SEPRIDIS	PY21e-Principal maintains disc.	227	94.2	4.6	1.2	4.0
SEMISBEH	P25-Misbehavior interfered/learning	226	86.7	8.4	5.0	1.7
SSGUARDS	PY55a-School has guards	218	95.6	3.8	0.6	6.3
SDPOLICY	PY56-Sch. has written disc. policy	214	95.5	2.7	1.8	1.5
SDDRUGS	PY59-Policy covers drugs	171	83.3	13.7	3.0	4.6
FCSTDS	P83c-Satisfied w/academic stand	227	100.0	0.0	0.0	NA
FCORDER	P83d-Satisfied with discipline	227	100.0	0.0	0.0	NA
FCMEETNG	P89a-Parents attd. gen. school meeting	226	99.2	0.8	0.0	NA
Drug/Alcohol Education						
EDDRUGS	P67-Child has drug education	206	83.3	13.7	3.0	4.6
EDCOURSE	PY68b-Drug ed/special course	128	73.4	19.2	7.4	2.6
EDPART	PY68a-Drug ed/part of reg course	121	83.3	14.8	2.0	7.6
EDDEMO	PY68c-Drug ed/assemblies	122	75.9	18.3	5.9	3.1
EDCLUBS	PY68d-Drug ed/other activities	121	73.0	18.8	8.2	2.3
Incidents						
SSSTEAL	PY26-Things stolen from locker/desk	226	85.1	11.5	3.4	3.3
SSSTEYOU	PY28-Things stolen from child	40	69.3	16.4	14.3	1.2
SSFORCE	PY29-Things taken by force	227	93.2	5.6	1.3	4.5
SSBULLY	PY34-Students bullied	226	77.2	15.9	6.9	2.3
SSBULSEE	PY35-Child saw bullying	49	92.7	1.3	6.0	0.2
SSBULYOU	PY37-Child was bullied	49	72.6	22.6	4.8	4.8
SSATTACK	PY39-Physical attacks took place	227	91.2	6.7	2.1	3.2
SSATTSEE	PY40-Child saw physical attack	11	55.9	20.8	23.3	0.9
SSATTYOU	PY42-Child physically attacked	12	78.8	0.0	21.2	0.0
SSINCDNT	PY45-Incident interfered/learning	72	75.0	10.5	14.5	0.7

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: All estimates in the table are weighted. If the percent agreement for the original and reconciled reinterview is zero, then the agreement ratio is undefined (NA).

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 17.—Estimates of agreement between original, unreconciled reinterview, and reconciled interview for SS&D, 6th to 12 graders

Question*		Sample size	Percent agreement of responses			Agreement ratio
			Original and reinterview	Unreconciled and reconciled	Original and reconciled	
General Environment						
SSGANGS	PY47-Any students in gangs	456	88.5	9.8	1.7	5.9
SSGUARDS	PY55a-School has guards	491	94.4	4.2	1.4	3.0
SSMETAL	PY55b-School has metal detector	475	99.0	0.9	0.1	11.8
SECHALNG	PY21a-Child challenged/school	491	87.6	8.7	3.7	2.3
SEPRIDIS	PY21e-Principal maintains disc.	491	90.2	8.2	1.7	4.9
SSROUTE	Y44a-Took special route to school	493	96.0	3.1	1.0	3.2
SSPLACES	Y44b-Avoid places at school	493	88.0	9.6	2.4	3.9
SSPARKNG	Y44c-Avoided place/school grounds	493	89.6	8.4	2.0	4.3
Drug/Alcohol Education						
EDPART	PY68a-Drug ed/part of reg course	492	77.2	17.2	5.7	3.0
EDCOURSE	PY68b-Drug ed/special course	491	72.1	19.0	8.9	2.1
EDDEMO	PY68c-Drug ed/assemblies/demo	491	94.5	5.5	0.0	NA
EDCLUBS	PY68d-Drug ed/other activities	486	74.9	17.6	7.5	2.3
Drug and Alcohol Use						
TADRUNK	PY63-Students drunk at school	492	87.9	9.7	2.5	3.9
TAHIGH	PY64-Students high at school	489	87.4	9.9	2.7	3.6
TADEAL	PY66-Drug dealers at school	492	90.0	8.0	2.0	4.0
Incidents						
SSSTEAL	PY26-Things stolen from locker/desk	487	78.5	17.6	3.9	4.6
SSSTEYOU	PY28-Things stolen from child	261	88.3	8.7	3.0	2.9
SSFORCE	PY29-Things taken by force	491	87.1	8.9	4.0	2.2
SSFORSEE	PY30-Saw things taken by force	29	55.3	21.1	23.6	0.9
SSFORYOU	PY32-Child's things taken /force	29	86.7	13.3	0.0	NA
SSBULLY	PY34-Students bullied	490	77.3	13.6	9.0	1.5
SSBULSEE	PY35-Child saw bullying	222	76.5	13.5	10.0	1.3
SSBULYOU	PY37-Child was bullied	222	82.9	9.9	7.2	1.4

71

72

Table 17.—Estimates of agreement between original, unreconciled reinterview, and reconciled interview for SS&D, 6th to 12 graders--Continued

Question*	Sample size	Percent agreement of responses			Agreement ratio
		Original and reinterview	Unreconciled and reconciled	Original and reconciled	
Incidents (continued)					
SSATTACK PY39-Physical attacks took place	492	75.3	15.7	9.0	1.8
SSATTSEE PY40-Child saw physical attack	141	85.7	12.4	1.8	6.8
SSATTYOU PY42-Child physically attacked	141	94.0	4.0	2.0	2.1
SSGANREL PY50-Any incidents/gang activity	118	86.9	11.3	1.8	6.2
SSRACIAL PY46-Any incident/racial motivation	349	83.7	10.5	5.9	1.8
SSWEAYOU Y51-Brought weapons	493	98.1	1.4	0.5	2.6
SSWEAOTH PY53-Others brought weapons	489	81.5	13.6	4.8	2.8

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: All estimates in the table are weighted. If the percent agreement for the original and reconciled reinterview is zero, then the agreement ratio is undefined (NA).

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

Table 18.—Estimates of agreement between original, unreconciled reinterview, and reconciled reinterview for SR

Question*		Sample size	Percent agreement of responses			Agreement ratio
			Original and reinterview	Unreconciled and reconciled	Original and reconciled	
Development						
HEADSTRT	R32-Enrolled in Head Start	363	95.1	4.0	0.9	4.3
HEADEVR	R33-Ever attend Head Start	843	96.5	2.1	1.4	1.5
PREKIND	R36-Attend nursery/presch	363	96.2	2.8	1.1	2.7
PREKEVR	R37-Ever attd. nursery/presch	679	92.0	5.9	2.1	2.8
PREKANY	R40-PreK had educ program	612	92.4	4.7	2.9	1.6
PREADING	R79a-Received help/read	353	93.3	5.5	1.3	4.2
PMATH	R79b-Received help/math	352	97.4	1.8	0.8	2.1
PADJUST	P79c-Received help/adjust	354	97.8	0.6	1.5	0.4
PSPEECH	P79d-Receivd help/speech	355	95.7	2.1	2.3	0.9
PENGLISH	P79e-Receivd help/ESL	354	97.6	1.4	1.1	1.3
HNFREE	R118-Free meal at school	713	97.0	2.2	0.7	3.1
HNHEALTH	R106-Child's general health	881	76.8	14.9	8.2	1.8
HNDOCWHN	R110-Last routine Doctor visit	882	89.0	8.4	2.6	3.2
Reading and Meals						
READTO	R96-Read/child last week	435	90.7	7.5	1.8	4.2
READTON	R97-# times read to child	370	83.1	11.8	5.1	2.3
READDAY	R98-Read every day	263	79.7	13.9	6.4	2.2
HNBREAK	R113-# days ate breakfast	362	92.5	5.8	1.7	3.3
HNDINNER	R115-# days/dinner together	362	75.1	22.3	2.7	8.3

*The specific questions can be found in the questionnaires in Appendix A.

NOTES: All estimates in the table are weighted. If the percent agreement for the original and reconciled reinterview is zero, then the agreement ratio is undefined (NA).

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1993.

The literature on the cognitive theory associated with this type of behavior is not extensively developed, perhaps because reconciliation of responses is not frequently attempted. One theory that may be pertinent is related to the way people recall events and is called the consistency principle. Pearson et al. (1992) suggest "when the consistency principle is invoked, people tend to view their current standing on an attribute as an accurate reflection of their past status." If this principle holds in the reinterview context, then it is likely that people will tend to agree with their latest response (the reinterview response) and assume the earlier (original) response was either incorrectly recorded or that some other type of error occurred.

If the consistency principle applies and respondents were trying to be consistent with their most recent responses, then the net difference rates should not be used to estimate response bias. This follows because net difference rates computed from reconciled values are measures of response bias only if the reconciled responses are more accurate than the original interview responses. If the reconciled response is motivated more by the need to give consistent rather than accurate responses, then there is little basis for the claim that the reconciled response is closer to the "true" value. While this explanation undermines the value of the net difference rate as a measure of bias, it is consistent with theoretical framework required to support the gross difference rate and index of inconsistency as a measures response variance.

On the other hand, it is possible to explain these results with another hypothesis. Suppose respondents thought about what they said in the original interview and recalled things they failed to say at the time of the original interview. Alternatively, suppose respondents were willing to give more accurate responses in the reinterview because they became more comfortable with the interview process as a result of the original interview. If either of these happened, then the reinterview responses should be more reliable than the original interview responses. In these circumstances, the agreement ratios should be greater than 1 because the reinterview responses are more reliable. Furthermore, the net difference rates using the reconciled reinterview responses could be useful measures of response bias because they might be better reflections of the "true" value than the original responses. However, the gross difference rates would no longer be valid measures of response variance because the situation described is not consistent with having independent, identically distributed responses from both interviews.

No empirical data are available to determine whether either of these explanations is correct. However, the NHES:93 reinterview procedures were developed to support estimating response variance rather than response bias. The same pool of interviewers was used for both interviews, the same questions were asked, and no additional guidance was given to the respondents or interviewers to support estimating response bias. As a result, the first hypothesis appears more plausible. If the first hypothesis holds, then the gross difference rates and indexes of inconsistency should be approximately valid measures of response variance and the net difference rates should be poor estimates of response bias.

Summary and Recommendations

The NHES:93 reinterview study provides a great deal of information on the reliability of the estimates from the survey and is a valuable source for examining the reliability of specific items. The gross difference rate and index of inconsistency are used to measure the consistency of response, while the net difference rate, computed using the original and reconciled reinterview responses, is used to assess response bias.

Many of the items in the SS&D had gross difference rates and indexes of inconsistency in the moderate to high range. The general environment items had low to moderate gross difference rates and indexes of inconsistency, but items that referred to specific events had larger estimates of response variance. For example, the gross difference rates and indexes of inconsistency were higher for estimates about stealing (a specific event) than estimates about the presence of metal detectors in the school (general environment). Several possible explanations were proposed for the lower reliability of these items but no evidence from this study can be used to evaluate these possible explanations. Cognitive laboratory work should be considered for these items prior to their inclusion in future surveys.

The items in the SS&D about alcohol and drug education and usage also had moderate to high response variance statistics. It was conjectured that respondents may have had some difficulty comprehending the intent of these items. The respondents may have interpreted what was being requested differently in the interviews. Additional developmental work is needed for these items before they are used in subsequent surveys.

Another important finding from the SS&D component reinterview was that the reliability of the items was approximately the same for both 6th to 12th graders and their parents. Initially, there was some concern that youth would be poorer respondents than adults in a telephone interview. The gross difference rates and indexes of inconsistency for the two types of respondents were nearly the same. While there is reason for some concern about the reliability of some items specific to the SS&D interview, the finding that adults and youth do not differ substantially in this regard should allay some of the concerns about the ability of youth to respond to a telephone survey like the NHES.

In general, the gross difference rates and indexes of inconsistency from the SR reinterview showed that the items were reported consistently. The gross difference rates and indexes for most of the items were in the low to moderate range for the SR items. Only two items, as discussed in the body of the report, had response variance statistics that warrant further evaluation. An important finding was that the revised method of asking about participation in Head Start programs resulted in more consistent responses than the method used in the NHES:91.

Another important finding from the SR component concerned the reliability of the television viewing composite variable and the developmental scale. The evaluation of the response variability for these two variables was very promising. The indexes of inconsistency for the variables were much lower than most of the indexes for the items used in creating the composites. This finding is encouraging for future analytic development and suggests that even difficult concepts may be attacked by using a set of related items rather than a single, complex one. Multiple questions do involve more interview time and data collection cost, but for key topics this seems a modest price for more reliable estimates. The NHES is well suited for this way of exploring complex issues, since its indepth topical components provide an opportunity to include multiple indicators of a construct, an approach that is not possible in the more limited space available in supplements to other household surveys or in general social surveys.

A final topic concerns a methodological issue. As discussed in the last section, the analysis of the reconciled responses yielded mixed results. One way of interpreting the findings is that the net difference rates computed using the reconciled responses are not valid estimates of response bias because the respondents are giving responses that are very consistent with the reinterview rather than giving more accurate

responses. If the reconciled responses are not valid estimates of response bias, then the use of reconciliation needs to be reconsidered. One alternative to the type of reconciliation used in the NHES:93 is a more indepth evaluation for a selected number of items if the original and reinterview responses differ. Special efforts could be used so that the final responses could be considered more valid than the original responses. An intensive reinterview study was conducted for the Adult Education component of the NHES:95, in which a flexible interview protocol was used to explore response issues using techniques similar to those used in cognitive laboratory debriefing (Brick et al. 1996). A different approach to intensive reinterviewing was carried out in the 1991 Teacher Follow-up Survey (Jenkins and Wetzel 1994). These types of reconciliation could clarify some of the ambiguities resulting from the current procedure.

Analysts using the NHES:93 data should find the results of this reinterview effort valuable when using the data sets. In particular, users should be careful in drawing conclusions based on the items with indexes of inconsistency greater than 45 and gross difference rates of greater than 20. High response variability, as indicated by these measures, weakens the relationships between variables, for example, attenuating the correlations between measures. Researchers may also want to take this research into account when planning studies of their own, with these items. Further examination of items that tend to have response problems may be warranted.

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Appendix A

Reinterview Questionnaires

NHES:93 School Safety and Discipline Reinterview

INTRO. Hello, my name is (INTERVIEWER). A few weeks ago, someone from our staff conducted an interview with you about (CHILD) for the U.S. Department of Education. We are reasking selected questions from the interview as a measure of survey quality. These questions should only take a few minutes.

If Respondent is a youth, go to YINTRO.

*P10. Does (CHILD) go to a public or a private school?

SCPUBLIC

PUBLIC	1	(GO TO P11)
PRIVATE	2	(GO TO P13)
REFUSED	-7	(GO TO P11)
DON'T KNOW	-8	(GO TO P11)

*P11. Is it (his/her) regularly assigned school or a school that you chose?

SCASSIGN

ASSIGNED	1	(GO TO P17)
CHOSEN	2	(GO TO P13)
ASSIGNED SCHOOL IS SCHOOL OF CHOICE	3	(GO TO P17)
REFUSED	-7	(GO TO P17)
DON'T KNOW	-8	(GO TO P17)

*P13. What is the main reason (CHILD) goes to this school and not some other school? [PROBE: What is the most important reason?]

SCREASON

FOR SPECIAL COURSES AND/OR ACADEMIC PROGRAMS, E.G., A MAGNET SCHOOL	1
FOR SPECIAL NONACADEMIC PROGRAMS, E.G., AFTER SCHOOL CARE OR SPORTS	2
EXPELLED FROM ANOTHER SCHOOL	3
SENT TO ALTERNATIVE SCHOOL	4
BETTER ACADEMICALLY	5
SMALLER SCHOOL/CLASSES	6
SAFER SCHOOL/AREA	7
MORE CONVENIENT LOCATION	8
BETTER DISCIPLINE IN THIS SCHOOL	9
RELIGIOUS REASONS	10
CANNOT AFFORD ANOTHER SCHOOL	11
OTHER (SPECIFY)_____	91
REFUSED	-7
DON'T KNOW	-8

*P17. Is this the first year (CHILD) has attended this school?

SCFIRST

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

*P18. Approximately how many students are enrolled in (CHILD'S) school? Would you say...

SCSTUD [PROBE: Do you know the number in (his/her) grade?]

Under 300 1
300 - 599 2
600 - 999, or 3
1,000 or more? 4
NUMBER OF STUDENTS IN GRADE GIVEN 5
REFUSED ..... -7
DON'T KNOW ..... -8

If P18 = 5, overlay number of students in grade.

SCSTUDGR NUMBER OF STUDENTS IN GRADE .....

*P19. Approximately what percent of the students are of the same race or ethnic background as (CHILD)? Would it be...

SCSAMETH

Less than 25 percent 1
25 to 75 percent, or 2
More than 75 percent? 3
REFUSED ..... -7
DON'T KNOW ..... -8

YINTRO. [IF RESPONDENT IS A YOUTH]: Hello, this is (INTERVIEWER). A few weeks ago, someone from our staff conducted an interview with you for the U.S. Department of Education. We are reasking selected questions from the interview as a measure of survey quality. These questions should only take a few minutes.

*PY21. When you think about [(CHILD'S)/your] experiences at [(his/her)/your] school since the beginning of this school year, would you strongly agree, agree, disagree, or strongly disagree with each of the following statements?
[1 = STRONGLY AGREE; 2 = AGREE; 3 = DISAGREE; 4 = STRONGLY DISAGREE]

			SA	A	D	SD	R	DK
SECHALNG	a.	[(CHILD) is/I am] challenged at school	1	2	3	4	-7	-8
SEPRIDIS	e.	The principal and assistant principal maintain good discipline at [(CHILD'S)/my] school	1	2	3	4	-7	-8

*P25. Has misbehavior by students in (CHILD'S) class this year interfered with (his/her) opportunity to learn? Would you say...

SEMISBEH

A lot 1
Somewhat 2
A little, or 3
Not at all? 4
REFUSED ..... -7
DON'T KNOW ..... -8

*PY26. (Have you heard/Do you know) of any of the following things happening during this school year? Things being stolen from lockers or desks?

SSSTEAL

YES	1	(GO TO PY28)
NO	2	(GO TO PY29)
REFUSED	-7	(GO TO PY29)
DON'T KNOW	-8	(GO TO PY29)

*PY28. Did it happen to [(CHILD)/you] this school year?

SSSTEYOU

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

*PY29. (Have you heard/Do you know) of money or other things being taken directly from students or teachers by force or threat of force at school or on the way to or from school this school year?

SSFORCE

YES	1	(GO TO PY30)
NO	2	(GO TO PY34)
REFUSED	-7	(GO TO PY34)
DON'T KNOW	-8	(GO TO PY34)

*PY30. Did [(CHILD)/you] see an incident like this happen to someone else?

SSFORSEE

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

*PY32. Did it happen to [(CHILD)/you] this school year?

SSFORYOU

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

*PY34. (Have you heard/Do you know) of any incidents of bullying during this school year? For example, do some students pick on others a lot or can they make other students do things like give them money?

SSBULLY

YES	1	(GO TO PY35)
NO	2	(GO TO PY39)
REFUSED	-7	(GO TO PY39)
DON'T KNOW	-8	(GO TO PY39)

*PY35. Did [(CHILD)/you] see an incident like this happen to someone else?

SSBULSEE

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

*PY37. Did it happen to [(CHILD)/you] this school year?

SSBULYOU

YES.....1
NO.....2
REFUSED.....-7
DON'T KNOW.....-8

*PY39. (Have you heard/Do you know) of any students or teachers being physically attacked, or involved in fights, during this school year?

SSATTACK

YES	1	(GO TO PY40)
NO	2	(GO TO BOX AFTER PY42)
REFUSED	-7	(GO TO BOX AFTER PY42)
DON'T KNOW	-8	(GO TO BOX AFTER PY42)

*PY40. Did [(CHILD)/you] see an incident like this happen to someone else?

SSATTSEE

YES.....1
NO.....2
REFUSED.....-7
DON'T KNOW.....-8

*PY42. Did it happen to [(CHILD)/you] this school year?

SSATTYOU

YES.....1
NO.....2
REFUSED.....-7
DON'T KNOW.....-8

If Respondent is a parent, go to box after Y44.

Y44. Did you do any of the following things because you were worried that someone might hurt or bother you?

			YES	NO	R	DK
SSROUTE	a.	Take a special route to get to school?	1	2	-7	-8
SSPLACES	b.	Stay away from certain places in the school?	1	2	-7	-8
SSPARKNG	c.	Stay away from the school parking lots or other places on school grounds?	1	2	-7	-8

If Respondent is a youth, go to PY46. If Respondent is a parent and P26 = 1 or PY29 = 1 or PY34 = 1 or PY39 = 1, ask P45. Else, go to box after P45.

*P45. Have any of those incidents that happened at (CHILD'S) school this year interfered with (his/her) opportunity to learn? Would you say...

SSINCDNT

A lot.....1
Somewhat.....2
A little, or.....3
Not at all?.....4
REFUSED.....-7
DON'T KNOW.....-8

If P6 < 6 or (P6 = 13 or 14 and P7 < 6) and respondent is a parent, go to PY55. Else, if PY26 = 1 or PY29 = 1 or PY34 = 1 or PY39 = 1, ask PY46; else, go to PY47.

PY46. Were any of those incidents that happened at [(CHILD'S)/your] school this year racially motivated?

SSRACIAL

YES	1	
NO	2	
REFUSED	-7	
DON'T KNOW	-8	

PY47. Do any of the students at [(CHILD'S)/your] school belong to fighting gangs?

SSGANGS

YES	1	(GO TO BOX)
NO	2	(GO TO BOX AFTER PY50)
REFUSED	-7	(GO TO BOX AFTER PY50)
DON'T KNOW	-8	(GO TO BOX AFTER PY50)

If PY26 = 1 or PY29 = 1 or PY34 = 1 or PY39 = 1, ask PY50. Else, go to box after PY50.

PY50. Were any of those incidents that happened at [(CHILD'S)/your] school this year related to gang activity?

SSGANREL

YES	1	
NO	2	
REFUSED	-7	
DON'T KNOW	-8	

If Respondent is a parent, go to PY53.

Y51. During this school year, did you ever bring something to school to protect yourself from being attacked or harmed?

SSWEAYOU

YES	1	(GO TO Y52)
NO	2	(GO TO PY53)
REFUSED	-7	(GO TO PY53)
DON'T KNOW	-8	(GO TO PY53)

Y52. Did you bring ...

			YES	NO	
SSGUN	a..	A gun	1	2	
SSKNIFE		b. A knife	1	2	
SSBRASS	c.	Brass knuckles	1	2	
SSRAZOR	d.	Razor blade	1	2	
SSJEWLRY	e.	Spiked jewelry	1	2	
SSMACE	f.	Mace	1	2	
SSCHUCKS	g.	Nunchucks	1	2	
SSSTICK	h.	A stick, club, or bat, or	1	2	
SSOTHER	i.	Something else	1	2	
		What was that?			
SSOTHEOS		_____			
	j.	REFUSED	-7		
	k.	DON'T KNOW	-8		

PY53. (Have you heard/Do you know) of any (other) students bringing weapons into [(CHILD'S)/your] school this year?

SSWEAOTH

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

*PY55. [Do you know if (CHILD'S) school takes/Does your school take] any particular measures to ensure the safety of students? For example, does the school have...

			YES	NO	R	DK
SSGUARDS	a.	Security guards?	1	2	-7	-8
SSMETAL	b.	Metal detectors?	1	2	-7	-8

If Respondent is a youth, go to Y60.

*P56. As far as you know, does (CHILD'S) school have a written discipline policy?

SDPOLICY

YES ..... 1 (GO TO P59)
NO ..... 2 (GO TO BOX AFTER P59)
REFUSED ..... -7 (GO TO BOX AFTER P59)
DON'T KNOW ..... -8 (GO TO BOX AFTER P59)

*P59. Does it cover alcohol and other drug possession, use, and distribution?

SDDRUGS

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

If Respondent is a parent and P6 < 6 or (P6 = 13 or 14 and P7 < 6), go to P67. Else, go to PY63.

Y60. Now I am going to read a list of statements that could describe a school. Thinking about your school this year, would you strongly agree, agree, disagree, or strongly disagree with the following...
[1=STRONGLY AGREE; 2 = AGREE; 3 = DISAGREE; 4 = STRONGLY DISAGREE]

			SA	A	D	SD	R	DK
SDFAIR	b.	The school rules are fair	1	2	3	4	-7	-8
SDENFORC	d.	The school rules are strictly enforced	1	2	3	4	-7	-8

PY63. (Have you heard of/Have you seen) any students (having been) drunk or showing the effects of alcohol when they were at [(CHILD'S)/your] school this year?

TADRUNK

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

PY64. (Have you heard of/Have you seen) any students (having been) high on other drugs such as marijuana, LSD, or cocaine when they were at [(CHILD'S)/your] school this year?

TAHIGH

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

PY66. (Have you heard of/Have you seen) anyone dealing drugs at school or within sight of school property this year?

TADEAL

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

If Respondent is a youth, go to PY68.

*P67. Has (CHILD) had any alcohol or other drug education course or program at school during this school year?

EDDRUGS

YES	1	(GO TO PY68)
NO	2	(GO TO BOX AFTER Y68)
REFUSED	-7	(GO TO BOX AFTER Y68)
DON'T KNOW	-8	(GO TO BOX AFTER Y68)

*PY68. There are many different ways that alcohol or other drug education can be presented to students. Did [(CHILD)/you] receive alcohol or other drug education in school this year...

			YES	NO	R	DK
EDPART	a.	As part of one of the regular courses, like science, health, or PE?	1	2	-7	-8
EDCOURSE	b.	A special course about alcohol or other drugs?	1	2	-7	-8
EDDEMO	c.	At assemblies or demonstrations outside of classes?	1	2	-7	-8
EDCLUBS	d.	In other school activities or clubs?	1	2	-7	-8

If Respondent is a parent and P6 < 6 or (P6 = 13 or 14 and P7 < 6), go to P81. Else, go to P77.

If Respondent is a youth, go to PY97.

P77. During this school year, has (CHILD) participated in any school activities such as sports teams, band or chorus, school clubs, or student government?

CCSCHL

YES 1
NO 2
SCHOOL DOES NOT OFFER ANY 3
REFUSED ..... -7
DON'T KNOW ..... -8

*P81. How many times has (CHILD) moved from one home or household to another during the last 5 years?

FCMOVED

NUMBER .....
REFUSED ..... -7
DON'T KNOW ..... -8

*P83. Would you say that you are very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied...
[1 = VERY SATISFIED; 2 = SOMEWHAT SATISFIED; 3 = SOMEWHAT DISSATISFIED; 4 = VERY DISSATISFIED]

			VS	SS	SD	VD	R	DK
FCSTDS	c.	With the academic standards of the school?	1	2	3	4	-7	-8
FCORDER	d.	With the order and discipline at the school?	1	2	3	4	-7	-8

*P89. Since the beginning of this school year, have you [or (CHILD'S) (mother/stepmother/foster mother/father/stepfather/foster father)] ...

			YES	NO	R	DK
FCMEETNG	a.	Attended a general school meeting, for example, back to school night or a meeting of a parent-teacher organization?	1	2	-7	-8

*PY97. Would you say [(CHILD'S)/your] school ...

COSCHOOL

Is safer than your neighborhood 1
About as safe, or 2
Not as safe as your neighborhood? 3
REFUSED ..... -7
DON'T KNOW ..... -8

*P124R. Have you and (CHILD) talked about (his/her) school experiences more than usual as a result of participating in this survey?

TALKMOR2

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

*P125R. Have you learned more about (CHILD'S) school from (him/her) or from other sources since the original interview?

LERNMOR2

YES.....1
NO.....2
REFUSED.....-7
DON'T KNOW.....-8

If discrepancies need to be reconciled, ask RECONCILIATION. Else, go to CLOSE3.

RECONCILIATION. We asked you [*display full question*]. One time we recorded [*display answer that comes first in original response categories*] and one time we recorded [*display answer that comes second in original response categories*]. What is the best answer?

[*Display all original response categories.*]

CLOSE3. Those are all the questions I have. Thank you for your time.

School Readiness Reinterview

INTRO. Hello, my name is (INTERVIEWER). A few weeks ago, someone from our staff conducted an interview with you about (CHILD) for the U.S. Department of Education. We are reasking selected questions from the interview as a measure of survey quality. These questions should only take a few minutes.

The developmental profile items are asked for preschooler; all others go to box before ECINTRO.

DPINTRO. These questions are about things that different children do at different ages. These things may or may not be true for (CHILD).

R14. Can (CHILD) identify the colors red, yellow, blue, and green by name? Would you say...
DPCOLOR

All of them.....1
Some of them, or.....2
None of them?.....3
REFUSED.....-7
DON'T KNOW.....-8

R15. Can (he/she) recognize...
DPLETTER

All of the letters of the alphabet.....1
Most of them.....2
Some of them, or.....3
None of them?.....4
REFUSED.....-7
DON'T KNOW.....-8

R16. How high can (CHILD) count? Would you say...
DPCOUNT

Not at all.....1
Up to five.....2
Up to ten.....3
Up to twenty.....4
Up to fifty, or.....5
Up to 100 or more?.....6
REFUSED.....-7
DON'T KNOW.....-8

R17. Can (CHILD) write (his/her) first name, even if some of the letters are backwards?
DPNAME

YES.....1
NO.....2
REFUSED.....-7
DON'T KNOW.....-8

R18. Can (he/she) button (his/her) clothes?
DPBUTTON

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R19. Does (he/she) hold a pencil properly?
DPPENCIL

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R20. Does (he/she) mostly write and draw rather than scribble?
DPWRITE

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R21. Does (he/she) trip, stumble, or fall easily?
DPFALL

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R22. Can (CHILD) be left alone with a babysitter without a big fuss?
DPSITTER

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R23. Does (CHILD) often have temper tantrums?
DPTEMPER

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R24. Is (CHILD) afraid to speak to people (he/she) doesn't know?
DPAFRADI

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R25. Is (he/she) very restless, and does (he/she) fidget a lot?
DPFIDGET

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R26. Does (he/she) have a very short attention span?
DPATTN

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R27. When (he/she) speaks, is (CHILD) understandable to a stranger?
DPSPEAK

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R28. Did (he/she) start speaking later than other children you know?
DPSPELA

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R29. Does (CHILD) stutter or stammer?
DPSTUTE

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R30. Does (he/she) turn on the television at a very high volume?
DPTV

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

R31. Does (he/she) bend over to look very closely at pictures or drawings?
DPBEND

YES....1
NO....2
REFUSED....-7
DON'T KNOW....-8

Preschoolers are asked about current participation and past participation if current = no.

Kindergartners (grades T, K, P) and primary students are asked about participation prior to kindergarten (or first grade if they did not attend kindergarten).

ECINTRO. These next questions are about early childhood programs and organized day care centers. We are not including babysitting or child care provided in private homes.

R32. [preschoolers only:]
Is (CHILD) now attending or enrolled in Head Start?

HEADSTRT

YES	1	(GO TO R36)
NO	2	(GO TO R33)
REFUSED	-7	(GO TO R33)
DON'T KNOW	-8	(GO TO R33)

33. [Prior to starting (kindergarten/first grade), did/Has] (CHILD) ever (attend/attended) Head Start?

HEADEVR

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

36. [preschoolers only:]
(Other than Head Start) Is (CHILD) now attending a nursery school, prekindergarten, preschool, or a day care center?

PREKIND

YES	1	(GO TO R40)
NO	2	(GO TO R37)
REFUSED	-7	(GO TO R37)
DON'T KNOW	-8	(GO TO R37)

37. [Prior to starting (kindergarten/first grade), did/Has] (CHILD) ever (attend/attended) nursery school, prekindergarten, preschool, or a day care center (other than Head Start)?

PREKEVR

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

If R32 or R33 or R36 or R37 = yes, ask R40. Else, go to box after R40.

R40. Have any of the (Head Start programs) (or) (nursery schools, prekindergartens, preschools, or day care centers) (CHILD) has gone to had an educational program?

PREKANY

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

Preschoolers go to R92.

SAINTRO. Children sometimes have difficulty adjusting to (school/kindergarten).

R51. On the average, during the first two months of this school year, that is, last September and October...

[1 = MORE THAN ONCE A WEEK; 2 = ONCE A WEEK OR LESS; 3 = NOT AT ALL]
[IF REFUSED -7, OR DON'T KNOW -8, GO TO NEXT INDICATOR, OR IF LAST INDICATOR, GO TO R52.]

			>1 WK	1 WK<	None
SACOMPLA	a.	Did (CHILD) complain about school more than once a week, once a week or less, or not at all?	1	2	3
SALEAVE	b.	Was (CHILD) upset or reluctant to go to school?	1	2	3
SASICK	c.	Did (he/she) pretend to be sick to stay home from school?	1	2	3
SAGOOD	d.	Did (he/she) say good things about school?	1	2	3
SATEACHR	e.	Did (CHILD) say (he/she) liked (his/her) teacher?	1	2	3
SASCHOOL	f.	Did (he/she) look forward to going to school?	1	2	3

R52. Since the beginning of this school year, has a teacher said or written that...

			YES	NO	R	DK	
TEWELL	a.	(CHILD) has been doing really well in school?	1	2	-7	-8	
TEABIL	b.	(CHILD) has not been learning up to (his/her) capabilities?	1	2	-7	-8	
TEATTENT	c.	(CHILD) doesn't concentrate, doesn't pay attention for long?	1	2	-7	-8	
TEDISRUP	d.	(CHILD) has been acting up in school or disrupting the class?	1	2	-7	-8	
TESAD	e.	(CHILD) has often seemed sad or unhappy in class?	1	2	-7	-8	
TEFIDGET	f.	(CHILD) has been very restless, fidgets all the time, or doesn't sit still?	1	2	-7	-8	
TESHARE	g.	(CHILD) has been having trouble taking turns, sharing, or cooperating with other children?	1	2	-7	-8	
TEGROUP	h.	(CHILD) gets along with other children or works well in a group?	1	2	-7	-8	
TEENTHUS	i.	(CHILD) is very enthusiastic and interested in a lot of different things?	1	2	-7	-8	
TENONEW	j.	(CHILD) lacks confidence in learning new things or taking part in new activities?	1	2	-7	-8	
TECLEAR	k.	It's hard to understand what (CHILD) is saying?	1	2	-7	-8	
TESLEEPY	l.	(CHILD) was often sleepy or tired in class?	1	2	-7	-8	
TEEXPRES	m.	(CHILD) likes to speak out in class and express (his/her) ideas?	1	2	-7	-8	

Primary students go to R79. Kindergartners go to R92.

R79. Has (CHILD) received any special help in school this year for children who are having trouble with...

			YES	NO	R	DK
PREADING	a.	Reading?	1	2	-7	-8
PMATH	b.	Arithmetic?	1	2	-7	-8
PADJUST	c.	Adjusting to school?	1	2	-7	-8
PSPEECH	d.	Speech?	1	2	-7	-8
PENGLISH	e.	English as a second language?	1	2	-7	-8

R92. On average, about how many hours of television or video tapes does (CHILD) watch <u>at home</u> each weekday, that is, Monday through Friday? How about...
[ENTER 95 IF R DOES NOT HAVE TV, GO TO R96.]

					R	DK
TVBFOR8H *TVBFOR8M*	a.	Before 8 am?	Hours	Min.	-7	-8
TV8TO3H *TV8TO3M2*	b.	Between 8 am and 3 pm?	Hours	Min.	-7	-8
TV3TDINH *TV3DINM*	c.	Between 3 pm and dinner time?	Hours	Min.	-7	-8
TVAFDIH *TVAFDIM*	d.	After dinner time?	Hours	Min.	-7	-8

R93. How about on Saturday and Sunday? How many hours does (CHILD) watch television or video tapes <u>at home</u> on...

					R	DK
TVSATH *TVSATM*	a.	Saturday?	Hours	Min.	-7	-8
TVSUNH *TVSUNM*	b.	Sunday?	Hours	Min.	-7	-8

R96. Now I'd like to talk with you about activities in your home in the past week.
In the past <u>week</u>, have you or has someone in your family read to (CHILD)?
READTO

YES	1	(GO TO R97)
NO	2	(GO TO R106)
REFUSED	-7	(GO TO R106)
DON'T KNOW	-8	(GO TO R106)

R97. How many times? Would you say...
READTON

One or two times, or	1	(GO TO R106)
Three or more?	2	(GO TO R98)
REFUSED	-7	(GO TO R106)
DON'T KNOW	-8	(GO TO R106)

R98. Was that every day in the past <u>week</u>?
READDAY

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

R106. In general, would you say that (CHILD'S) health is...
HNHEALTH

Excellent	1
Very good	2
Good	3
Fair, or	4
Poor?	5
REFUSED	-7
DON'T KNOW	-8

R110. About how long has it been since (CHILD) last saw a medical doctor or other health professional for a checkup, shots, or other routine care? Would you say...

HNDOCWHN

Less than 1 year.....1
1 year, but less than 2 years.....2
2 years or more?.....3
REFUSED.....-7
DON'T KNOW.....-8

R113. During the last week, that is, since last (DAY OF WEEK), on how many days did (CHILD) eat breakfast, either at home or somewhere else?

HNBREAK

DAYS.....0
REFUSED.....-7
DON'T KNOW.....-8

If child is a preschooler, go to R115. Else, go to R118.

R115. During the last week, on how many days did the whole family sit down to eat dinner together?

HNDINNER

DAYS.....0
REFUSED.....-7
DON'T KNOW.....-8

If child is in school or kindergarten, or if child is a preschooler in a center-based program, go to R118. Else, go to R159.

R118. Does (CHILD) receive government funded free or reduced price breakfast or lunch at [(PROGRAM)/school]?

HNFREE

YES.....1
NO.....2
REFUSED.....-7
DON'T KNOW.....-8

Kindergartners and primary students, go to CLOSE3; Preschoolers, go to R159.

ARINTROR. I have a few more general questions about issues involving children.

R159. Now I'm going to ask you how important you think it is for <u>any</u> child to know or do certain things to be ready for kindergarten.

How important do you think it is that a child...

		E	VI	SI	NVI	NI	R	DK
KPCOUNT	a. Can count to 20 or more? Would you say essential, very important, somewhat important, not very important, or not at all important?	1	2	3	4	5	-7	-8
KPSHARE	b. Takes turns and shares?	1	2	3	4	5	-7	-8
KPCURIOS	c. Is enthusiastic and curious in approaching new activities?	1	2	3	4	5	-7	-8
KPPENCIL	d. Is able to use pencils and paint brushes?	1	2	3	4	5	-7	-8
KPSTILL	e. Sits still and pays attention?	1	2	3	4	5	-7	-8
KPALPHA	f. Knows the letters of the alphabet?	1	2	3	4	5	-7	-8
KPVERBAL	g. Communicates his or her needs, wants, and thoughts verbally?	1	2	3	4	5	-7	-8

If discrepancies need to be reconciled, ask RECONCILIATION. Else, go to CLOSE3.

RECONCILIATION. We ask you [*display full question*]. One time we recorded [*display answer that comes first in original response categories*] and one time we recorded [*display answer that comes second in original response categories*]. What is the best answer?

[*Display all original response categories.*]

CLOSE3. Those are all the questions I have. Thank you for your time.

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